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THE NEUTROPHILE INDEX 920
THE BUDGET 921

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Clinical Kinematographs 922
Recovery from Addison's Disease 923
Infantile Diarrhœa and Vomiting 923
The Myth of Bacterial Longevity 923
School Medical Administration in Scotland 924
Credé's Method and Puerperal Septicæmia 924
Ophthalmological Society of the United Kingdom 925
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The China Medical Missionary Association Conference at Peking 926
Medicine and the Law 927
Control of Venereal Disease 928
Scotland 929
Ireland 930
Paris 930
Urban Vital Statistics: Vital Statistics of London during March, 1920 931

CORRESPONDENCE.

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Notes on Current Topics: Medical Men and the Budget 935
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The Nurses' Coöperation 931
Dinner of the Harrogate Medical Society 932
Post-graduate Course on Spa Treatment 934
Royal College of Physicians of Edinburgh, Royal College of Surgeons of Edinburgh, and Royal Faculty of Physicians and Surgeons of Glasgow: Pass-list 937
Royal College of Surgeons in Ireland 937
The Tuberculosis Society of Great Britain and Ireland .. 937
Royal Army Medical Corps Central Mess Fund 937
Auxiliary Royal Army Medical Corps Funds 937
The Council of British Ophthalmologists 937
Ophthalmological Society of the United Kingdom 937
General Nursing Council 938
Increased Capitation Fees for Postal Medical Officers 938
A Conference on Dental Hygiene 938
Death of Mr. E. A. Maling, M.R.C.S. 938

THE SERVICES.

Royal Naval Medical Service 938
Army Medical Service 938
Royal Army Medical Corps 938
Royal Air Force 939
Indian Medical Service 939

NOTES, SHORT COMMENTS, &c.

Lambeth Medical Degrees 941
The Rheumatic School Child 941
The Inventor of the Incubator 942
Dublin Radium Institute 942
The Incision of Small-pox Pustules 942
Public Health in Somaliland 942

Medical Diary 939
Acknowledgments of Communications received 939
Appointments, Vacancies 940
Births, Marriages, and Deaths 940

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M. macedoniensis, Cast. (rare), ferments, with production of gas, glucose, lævulose, galactose, saccharose, and inulin.

M. pseudotropicalis (extremely rare), ferments, with production of gas, lactose in addition to other sugars.

M. pseudolondinensis, ferments dextrin in addition to other sugars.

M. zeylanica, Cast. (Fig. 4), does not produce gas in any sugar or other carbohydrate. This group contains the following species: *M. zeylanica*, Cast., *M. zeylanoides*, Cast.

M. albicans, Robin, *sensu stricto* belongs to the metalondinensis type, and I have very seldom isolated it.

I should like to emphasise the point that a large number of fungi of the genus *Monilia* have not permanent sugar reactions, they often lose some of their original fermentative properties and can be trained to ferment sugars which they do not ferment when recently isolated, and therefore, for purposes of classification and comparison, such fungi should be investigated, using only recently isolated strains (see Table I.).

Fungi of the genus Oidium sensu stricto.—This genus is morphologically closely allied to monilia, and mycelial threads are very abundant both in the lesions and in cultures, and budding, yeast-like cells are rare. Fungi of this genus may occasionally induce an acid fermentation, but never produce gas in any carbohydrate. I have found fungi of this genus in certain cases of thrush in the tropics and in the Balkans, but so far not in England. I have isolated three species (Figs. 5, 6, and 7): *Oidium matalense*, Cast., *O. asteroides*, Cast., and *O. rotundatum*, Cast. It is interesting to note that I have found the same species in cases of mycotic tonsillitis and in the expectoration of certain cases of bronchitis, while I have observed *O. asteroides* also in the stools of certain cases of enteritis.

Class: *Fungi imperfecti.*	Order *Thallosporales*—Family *Oösporaceæ*, Saccardo.	Genus *Monilia*, Persoon—Several species. Genus *Oidium*, Link—Three species.
Sub-class: *Hyphales.*	Order *Hemisporales*—Genus *Hemispora*, Vuillemin—One species.	
Class: *Ascomycetes*—Sub-class: *Protoascomycetes*—Order *Saccharomycetales.*	Family *Endomycetaceæ*, Rees—Genus *Endomyces*, Rees—One species.	
	Family *Saccharomycetaceæ*, Rees.	Genus *Saccharomyces*, Meyen—One species. Genus *Willia*, Hansen—One species.

Fungi of the Genus Monilia, Persoon.

These are the fungi most commonly found in thrush. As regards their botanical characters, it suffices to say, from a practical point of view, that these fungi are characterised principally by the following features. In the lesions the vegetative body (thallus) is composed of mycelial threads of rather large size often showing arthrospores and numerous free oval or roundish budding yeast-like forms; in cultures, especially on solid media, mostly roundish or oval budding elements are seen, while mycelial filaments are very scarce or absent. These fungi, as a rule, ferment with production of gas, glucose, and often other sugars. The only monilias I know of which do not attack any sugar or other carbohydrate are *M. zeylanica*, Cast., and *M. zeylanoides*, Cast.

There is little doubt that the original fungus *Oidium albicans*, described by C. Robin in 1853, belongs in reality to this genus, and its correct name is therefore *Monilia albicans* (C. Robin, 1853). There is little doubt also that the term *Oidium* or *Monilia albicans* has been used in the past to cover a number of different fungi, as proved by the widely different descriptions of it given by different authors. For instance, some observers state that the organism liquefies gelatin, others deny that it possesses such action. Certain authorities describe it as coagulating milk, others as having no action on this medium.

Fungi of the genus Hemispora.—The botanical characters of these fungi I have given in my first lecture. They are characterised by the presence of abundant mycelial hyphæ, some of which are *conidiophores*. Each *conidiophore* terminates into an ampulliform or sausage-like structure, which is called *protoconidium*. The *protoconidium* later divides into a number of spore-like segments, which are called *deuteroconidia*.

So far only one species of this genus has been found in cases of thrush, *Hemispora rugosa* (Fig. 8). This fungus was first isolated by me from a case of mycotic tonsillitis in 1910, and observed in a case of thrush by Pijper in 1915. Two varieties can be distinguished: one liquefying gelatin, the other having no such action on the medium.

Fungi of the genus Willia, Hansen.—These fungi are characterised by the peculiar bowler-hat shape of their ascospores. I isolated a fungus belonging to this genus in Macedonia from a case of thrush in a gipsy. In sugar broths it formed a thick pellicle containing air-bubbles.

* Lecture I. appeared in THE LANCET of April 17th, 1920 (p. 847).

TABLE I.—FUNGI OF GENUS MONILIA.

—	Glucose.	Lævulose.	Galactose.	Maltose.	Lactose.	Saccharose.	Inulin.	Dextrin.	Litmus milk.	Colour.
Monilia alba, Castellani, 1911.	AG	AG	AG	AG	0	A	0	0	AC	W
M. albicans, Robin, 1853.	AG	AGS	AG	AGS	0	AVS	0	0	AC	W
M. balcanica, Cast., 1916.	AG	AS	0	0	0	0	0	0	0	W
M. blanchardi, Cast., 1912.	AGS	A	A	A	0	A	AVS	0	AVS / ALK	W
M. bronchialis, Cast., 1910.	AG	AG	0	AG	0	AGS	0	A	0	W
M. burgessi, Cast., 1912.	AGS	A	A	AGS	0	AGS	0	0	0 / ALK	W
M. chalmersi, Cast., 1912.	AG	AG	AGS	AS	0	AG	AGS	0	AS / ALK	W
M. decolorans, Cast. and Low, 1913.	AG	AG	A	AG	0	A	0	A	DC	W
M. enterica, Cast., 1911.	AG	AG	AG	AG	0	AG	0	AS	0 / ALK	W
M. faecalis, Cast. 1911.	AG	AG	AGS	AG	0	AGS	0	0	A / DPS	W
M. guillermondi, Cast., 1910.	AG	AG	A	AS	0	AG	0	0	0 / ALK	—
M. insolita, Cast., 1911.	AG	AG	AG	AG	0	AG	0	0	AS / ALK	W
M. intestinalis, Cast., 1911.	AG	AG	A	AS	0	A	0	0	ADS	W
M. krusei, Cast., 1909.	AG	AG	0	0 or AS	0	0	0	0	0	W
M. condinensis, Cast., 1916.	AG	AG	A	A	A	A	0	0	AC	W
M. lustigi, Cast., 1912.	AG	AGS	A	AVS	0	AGS	0	0	AS / D	W
M. macedoniensis, Cast., 1917.	AG	AG	AG	A or 0	0	AG	AG	0	AC	W
M. metalondinensis, Cast., 1916.	AG	AG	AG	AG	0	0	0	0	0	W
M. metatropicalis, Cast., 1916.	AG	AG	AG	AG	0	AG	0	0	AC	W
M. nabarroi, Cast., 1917.	AG	AG	0	AG	0	0	0	0	AC	W

—	Glucose.	Lævulose.	Galactose.	Maltose.	Lactose.	Saccharose.	Inulin.	Dextrin.	Litmus milk.	Colour.
M. negrii, Cast., 1911.	AG	AG	AGS	AS	0	AG	0	0	AVS / ALK	W
M. nitida, Cast., 1910.	AG	AG	A	A	A	A	0	AVS	A / DC	W
M. nivea, Cast., 1910.	AG	AG	AG	AG	0	AGS	0	0	0 / ALK	W
M. parabalcanica, Cast., 1916.	AG	AS	0	0	0	0	0	0	AC	W
†*M. parachalmersi*, Cast., 1917.	AG	AG	AG	0	0	AG	AG	0	AC	W
M. parakrusei, Cast., 1912.	AG	AG	0	0	0	0	0	0	AC	W
M. paratropicalis, Cast., 1912.	AG	AG	AG	AG	0	AG	0	AVS	AS / ALK	W
M. perrui, Cast., 1912.	A	AGS	A	A	0	AGS	AVS	0	AS / D, ALK	W
M. pinoyi, Cast., 1910.	AG	AG	0	AG	0	0	0	0	0	W
M. pseudo-bronchialis, Cast., 1916.	AG	AG	0	AG	0	AG	0	0	AC	W
M. pseudo-guillermondi, Cast., 1916.	AG	AG	0	0	0	AG	0	0	AC or P	W
M. pseudo-londinensis, Cast., 1916.	AG	AG	AG	AG	0	0	0	AG	0	W
M. pseudo-londinoides, Cast., 1916.	AG	AG	AG	AG	0	0	0	AG	AC	W
M. pseudo-metalondinensis, Cast., 1916.	AG	AG	AG	AG	0	0	AG	0	AC	W
M. pseudo-tropicalis, Cast., 1910.	AG	AG	AGS	0	AG	AG	0	0	ACS	W
M. pseudo-tropicaloides, Cast., 1919.	AG	AG	AG	0 or A	AG	AG	0	0	0	W
M. pulmonalis, Cast., 1911.	AG	AG	AGS	AG	0	AG	0	0	0 / ALK, D	W
M. rhoi, Cast., 1909.	AG	AG	AGS	AVS	0	AG	0	0	AS / ALK	W
M. rosea zenoni, 1910.	—	—	—	—	—	—	—	—	—	P
M. tropicalis, Cast., 1909.	AG	AG	AGS	AG	0	AGS	0	0	A	W
M. zeylanica, Cast., 1910.	A	A	A	A	AS	A	AVS	A	ACS	Y
M. zeylanoides, Cast., 1919.	A	A	A	A	0 or AS	A	0 or AS	A	0	Y

Abbreviations.—A = acid. G = gas. C = clot (milk), clear (broth and peptone water). CTP = clear at first; then thin pellicle present. D = decolorised. P = peptonised (milk), pellicle (broth). ALK = alkaline. A/ALK = acid, then alkaline. S = slight. VS = very slight. 0 = negative result—viz., neither acid nor clot in milk; neither acid nor gas in sugar media; non-production of indol; non-liquefaction of gelatin or serum, as the case may be. + = positive result, liquefaction of medium. In column headed "Colour," W = white, P = pink, Y = yellowish.

* Gelatin +, Serum +s. † Gelatin +. In all other instances gelatin and serum gave a negative result.

It produced gas in glucose and lævulose only. Cultures on solid media contained asci with 2–4 spores of the peculiar bowler-hat-like appearance. (Fig. 9.) The fungus seemed to be somewhat similar to *Willia anomala*, Hansen, but the investigation of it is not yet complete.

Fungi of the genus Endomyces, Link.—These fungi are on superficial examination similar to those of the genus *Monilia*, budding elements and MYCELIAL THREADS being found in the lesions, and mostly budding elements in cultures. There is, however, a very important character which differentiates these fungi: in old cultures of endomyces asci are present. Only once have I come across a case of thrush due to a true endomyces, in Macedonia in 1917. I considered it to be *E. vuillemini*, Landrieu.

Fungi of the genus Saccharomyces, Meyen.—In the Balkans I found a case of thrush due to a typical saccharomyces, which I have only recently studied. Fungi of this genus are characterised by the vegetative body consisting only of budding elements, and by the presence of asci in cultures. The saccharomyces isolated by me ferments with production of gas, glucose, lævulose, galactose, maltose, and saccharose. It does not clot milk, which, however, may occasionally become acid. Gelatin and serum are liquefied.

Clinical Varieties of Thrush caused by Above Fungi.

I have always endeavoured to combine the laboratory and the clinical investigation of the cases of thrush observed, in order to see whether different groups of fungi are causing different types of the condition. In my experience two principal varieties of thrush may be distinguished clinically:—

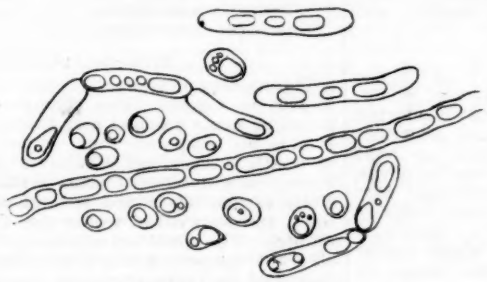
1. *White, or white-greyish type.*—This is by far the most common, and in this country apparently the only one found. It is characterised by the cream-white colour of the patches.

2. *Yellow, or yellow-brownish type.*—This is characterised by the yellowish, occasionally brownish, colour of the patches.

The first type (or white type) may be caused by any species of the genus *Monilia* (except *M. zeylanica*, Cast., and *M. zeylanoides*, Cast.), by *Oidium matalense*, Cast., by *Endomyces vuillemini*, Landrieu, and by fungi of the genus *Saccharomyces*, Meyen, and *Willia*, Hansen. The second type (or yellow variety) is caused by *M. zeylanica*, Cast., *M. zeylanoides*, Cast., *Oidium rotundatum*, Cast., and *Hemispora rugosa*, Cast.

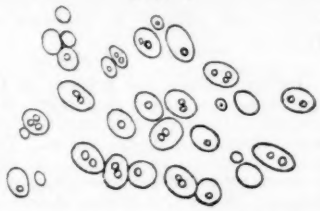
In conclusion, I should like to say again that thrush is not caused by one species of fungus only, the so-called thrush-fungus or *Oidium albicans*, Robin, as generally

FIG. 1.



Monilia tropicalis: direct from the lesions.

FIG. 2.



Monilia tropicalis: preparation from a glucose-agar culture.

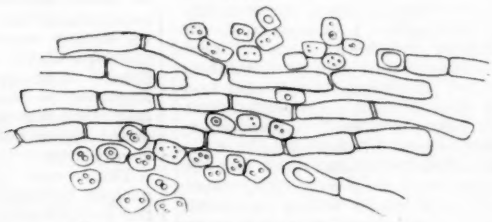
FIG. 3.

Monilia tropicalis: glucose-agar culture.

FIG. 4.

Monilia zeylanica: glucose-agar culture.

FIG. 5.

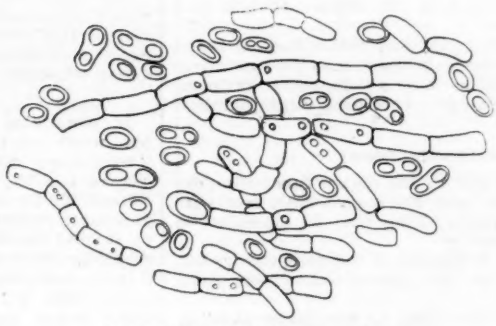


Oidium asteroides: from a glucose-agar culture.

FIG. 6.

Oidium asteroides.

FIG. 7.

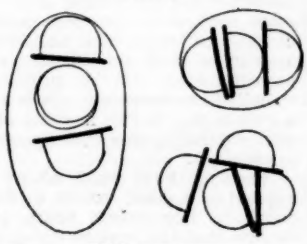


Oidium rotundatum: from a culture.

FIG. 8.

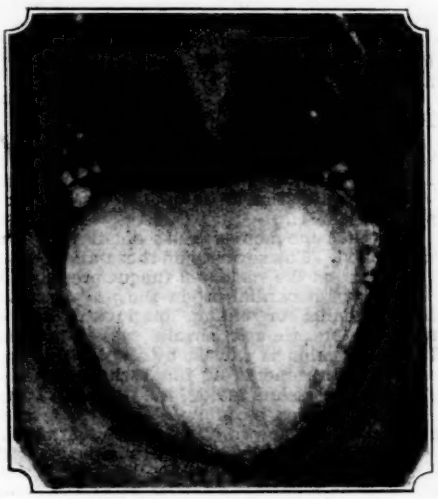
Hemispora rugosa: glucose-agar culture.

FIG. 9.



Willia ascospores.

FIG. 10.



Tonsillo-mycosis due to *Hemispora rugosa*.

stated. It is caused by a number of different fungi, some of which are botanically very far apart from each other, and belong to separate species, genera, and families.

Sprue.

Before leaving the subject of thrush I might say a few words on a very important tropical disease, which, according to many authorities, is ætiologically connected with thrush—namely, sprue. This tropical affection, very common in Ceylon, is characterised, as well known, by profound anæmia, progressive wasting of the patient, and white, frothy diarrhœa. Kohlbrügge first in 1901[1] ascribed the disease to the thrush fungus: *Oidium* or *M. albicans*. He made a very thorough histological study of one of his cases which ended fatally, and emphasised the fact that the fungi, in sections of the tongue, &c., had invaded the deep strata of the mucosa, the glands, and portions of the submucosa. These findings were speedily confirmed by other observers, and Le Dante in 1907 suggested for the disease the term of "Blastomycosis intestinalis." During my long stay in Ceylon I investigated the intestinal mycological flora of several cases of sprue, and I found that fungi were present almost constantly. I noted the following: *M. decolorans*, Cast. and Low, *M. intestinalis*, Cast., *M. fæcalis*, Cast., *M. insolita*, Cast., *M. tropicalis*, Cast., *M. enterica*, Cast., *Oidium rotundatum*, Cast., *O. asteroides*, Cast. I believed the monilias to be the probable cause of the frothy diarrhœa, but I did not agree with Kohlbrügge that they were the primary cause of the malady. Low came to the same conclusion as I did. Recently Kohlbrügge's theory has been supported in a series of publications by Bahr, Ashford, and others, while Sir James Cantlie has brought forward the hypothesis that it is a deficiency disease, and Sir Leonard Rogers and Nicholl the theory that it is a streptococcus infection.

I have made tentatively the suggestion that, as is the case with dysentery, the term sprue may perhaps cover several clinically similar but ætiologically different conditions: one might be of mycological origin, another of bacterial origin, &c.

BRONCHO-MYCOSES.

Bronchial affections due to the higher fungi are quite common in the tropics, and are occasionally met with also in temperate climates. They may be classified in several groups as follows:—

1. Causative fungus belonging to the genus *Nocardia*, Toni and Trevisan, or the genus *Cohnistreptothrix*, Pinoy: Nocardiasis.
2. Causative fungus belonging to the genus *Monilia*, Persoon: Broncho-moniliasis.
3. Causative fungus belonging to the genus *Oidium*, Link: Broncho-oïdiosis.
4. Causative fungus belonging to the genus *Hemispora*, Vuillemin: Broncho-hemisporosis.
5. Causative fungus belonging to the genus *Aspergillus*, Micheli, and *Sterigmatocystis*, Cramer: Broncho-aspergillosis.
6. Causative fungus belonging to a *Penicillium*, Link: Broncho-penicilliosis.
7. Causative fungus belonging to the genera *Mucor*, Micheli; *Rhizomucor*, Lucet and Constantin: Broncho-mucormycosis.
8. Causative fungus is a *Sporotrichium*: Broncho-sporothrichosis.

I have come across cases of all the forms I have mentioned. The severity of these affections depends a great deal on the variety of fungus present. If the condition is of nocardial origin the prognosis is very bad, if of monilia or oidium origin the outlook is less unfavourable, though certain cases terminate fatally. If the affection is caused by a sporotrichium, a hemispora, or in general by fungi which are rapidly influenced by potassium iodide, the prognosis is good.

I may perhaps be allowed to say a few more words about three of the varieties I have mentioned.

1. Broncho-moniliasis, and in connexion with it "tea-factory and tea-taster's cough."
2. Broncho-mucormycosis.
3. Broncho-aspergillosis.
4. Broncho-penicilliosis.
5. Broncho-nocardiasis.

Broncho-moniliasis.

This variety of broncho-mycosis was described by me in 1905 in Ceylon. The condition has recently been found in many tropical and subtropical countries, and even in the temperate zone. Pijper has described cases in South Africa, and Chalmers and MacDonald and Fahra had a number of cases in the Soudan and Egypt, while Iacono has found several cases in the south of Italy, and only a few weeks ago I found a case in this country. The condition appears to be caused by several different species of the genus *Monilia*, which I have described on other occasions (see also Castellani and Chalmers's Manual of Tropical Medicine, p. 1886).

Clinically, a mild type and a severe type of the malady may be distinguished, with, of course, a number of intermediate cases. In the mild type the general condition of the patient is good, there is no fever, and he simply complains of cough. The expectoration is muco-purulent, often scanty, and does not contain blood. The physical examination of the chest is negative or reveals only a few râles. The condition may last for several weeks or months, and may get cured spontaneously, or continuing, may turn into the severe type.

The severe type closely resembles phthisis. The patient becomes emaciated, there is hectic fever, and the expectoration is often bloody. The physical examination of the chest may show patches of dullness, fine crepitations, pleural rubbing. This type may be fatal.

The treatment consists in giving potassium iodide to which glycerophosphates and balsamics may be associated. It is interesting to note, however, that in certain cases potassium iodide has practically no beneficial action whatever.

Tea-taster's Cough.

In connexion with broncho-moniliasis, I may say a few words on the so-called "tea-taster's cough" and "tea-factory cough." In 1906 a young assistant in one of the big Ceylon firms, a tea-taster, came to consult me for a chronic cough, which he said had not yielded to ordinary treatment, and had been suspected by several medical men to be of tuberculous origin. He emphatically stated, however, that he did not believe it was tuberculosis. "I am merely suffering," he said, "from tea-taster's cough," an expression I had never heard before. The general condition of the patient was good, and the physical examination of the chest revealed only a few coarse râles. The microscopical examination of the sputum was negative for T.B.; instead I noticed microscopically some mycelial filaments and some yeast-like bodies. I inoculated several glucose-agar tubes and I grew a monilia fungus which, at the time, I believed to be an endomyces.

How did this patient get infected? Tea-tasters, in order to judge of the quality of the various teas, not only taste infusions, but often fill their hands with the tea-leaves and bury their noses in them, sniffing them up; in this way a certain amount of tea-dust enters the nasal cavities. Now if one examines tea-dust in Ceylon one finds that it contains fungi of the genus *Monilia* constantly, of the genera *Aspergillus* and *Penicillium* frequently, and of the genus *Oidium* occasionally. A peculiar streptococcus is also very often present. The same organisms are not rarely found in the nasal cavities of tea-tasters, and when bronchial symptoms appear in them monilia-like fungi are present in the expectoration. It is probable therefore that the so-called tea-taster's cough is a moniliasis, especially as a guinea-pig, in the nostrils of which I insufflated tea dust regularly, died with symptoms of chronic broncho-pneumonia.

What I have said about "tea-taster's cough" applied to a great extent to the so-called "tea-factory cough." For many years planters have noted in Ceylon that the coolies doing work in the tea-factory, where the leaves are dried and there is a large amount

[1] Arch. f. Schiffs u. Tropen Hygiene, 1901, No. 12.

of tea-dust floating about, after some months become weak, lose flesh, and often have a cough with muco-purulent expectoration. The planters have found by experience that these coolies must be taken away from the factory and sent to work in the field, and then the symptoms slowly disappear. I have examined some of these coolies, and their expectoration practically always contains fungi of the genus *Monilia*. I have little doubt, therefore, that the so-called tea-factory cough is a broncho-mycosis and probably a broncho-moniliasis.

Broncho-mucormycosis.

While I was in Macedonia a Serbian was sent to me with the diagnosis of T.B. The patient was very anæmic, very weak, and was losing flesh rapidly; slight fever at night. Sputum muco-purulent. The examination of the chest revealed nothing except a few coarse râles. Examination of the sputum for T.B. constantly negative; instead, a few mycelial segments were noticed on several occasions. Glucose agar tubes and other media were inoculated and a fungus was isolated, which at first showed cultural characters somewhat monilia-like; in subcultures, however, the characters of a mucor appeared; a yellowish ovoid-shaped "columella," sporangium globular, about 50 micron in diameter, of yellowish colour; spores elliptical, smooth.

How did this patient get infected? It is interesting to note that he was in charge of horses and often had to remove horse-dung. As is well known, *Mucor mucedo*, L., is extremely common in horse-dung.

Broncho-aspergillosis.

I have seen several cases of this condition in the tropics—a case in an island in the Adriatic, another in Macedonia. These two cases have been diagnosed as T.B.; from one *Aspergillus fumigatus*, Fresenius, was grown; from the Macedonian case a fungus very similar or identical with *Sterigmatacystis nigra*, Cramer, was isolated. In France, as well known, a peculiar bronchial aspergillosis is common among pigeon breeders (*gaveurs de pigeon*), who fill their mouths with grain and blow it into the mouths of the pigeons. The grain contains spores of various aspergilli and after a time most *gaveurs* become infected.

Broncho-penicilliosis.

A Serbian soldier was sent to me with the diagnosis of T.B. He was wasting and had serotine fever. Expectoration muco-purulent, occasionally bloody. Examination for T.B. constantly negative. A few mycelial threads present. A fungus was grown with the characters of *Penicillium crustatum*, L. Potassium iodide acted satisfactorily.

Broncho-nocardiasis.

In the Balkans I have observed one case of this condition, in the tropics several. The case seen in the Balkans was a young Serbian with all the symptoms of tuberculosis of the lungs; great loss of flesh, serotine fever, bloody expectoration; the physical examination of the chest showed patches of consolidation, crepitations, and pleural rubbing. The sputum contained at times some very small, whitish granules, composed of very thin branching filaments, Gram-positive, and partially acid-fast. The fungus was easily grown on maltose and glucose-agar, and in subcultures also on ordinary agar. The cultures had at times a pink-reddish colour. Gelatin was liquefied. No treatment was of any avail.

TONSILLO-MYCOSES.

Mycotic affections of the tonsils are far from being rare, especially in tropical countries. The more chronic conditions, especially of the crypts, due to nocardia-like and leptothrix-like fungi, have been known for many years, but I should like to call attention to certain acute mycological affections which I have described during the last 15 years, and which not rarely have been mistaken for diphtheria—viz., tonsillar moniliasis, tonsillar oidiomycosis, and tonsillar hemisporosis. (Fig. 10.)

Acute tonsillar moniliasis.—CASE 1.—Singhalese girl, about 11 years, admitted to the Infectious Diseases Hospital of Colombo with the diagnosis of diphtheria. There were white patches on the tonsils, uvula, and soft palate. The temperature was rather high (102°); the pulse frequent and of low pressure. There was swelling of the lymphatic glands at the angle of the jaw. The child developed symptoms of broncho-pneumonia and died three days after admission. (Anti-diphtheria serum was given twice by the physician in charge of the hospital.) The microscopical and bacteriological examination of the patches for the Klebs-Löffler bacillus, carried out with the usual technique, using serum-media, &c., remained negative. No bacteria of any kind were seen in the specimens directly taken from the patches, but numerous mycelial and conidial elements of a fungus were present. On serum and glycerine agar media no colonies of diphtheria or other bacteria. The fungus had all the characters of *Monilia tropicalis*, Cast.

CASE 2.—A young European lady, 22 years of age, became suddenly ill with sore-throat at one of the Colombo hotels. Her medical attendant suspected diphtheria, and called me to see her in consultation. When I examined her the temperature was 101°, pulse 98; she complained of difficulty and pain in swallowing, both tonsils and uvula were covered with white creamy patches. Preparations made from the patches revealed an enormous number of yeast-like organisms and a few cocci, while no bacilli of any kind were present. This, of course, was sufficient to exclude diphtheria. On glucose agar tubes a fungus grew in pure culture with all the characters of a monilia. This monilia rendered milk slightly acid, and then decolorised it completely; did not liquefy serum or gelatin. On serum it induced a narrow zone of black discoloration all round the growth.

Acute tonsillar oidiosis.—European, 25 years of age; since several years in Ceylon. In November, 1914, was taken ill with severe sore-throat, difficulty in swallowing, and high fever (104° F.). When I saw him, 12 hours after onset, both tonsils were covered with a white exudation, but not the uvula.

The microscopical and bacteriological investigation showed absence of the diphtheria bacillus, while a fungus was grown with the botanical characters of an oidium. Further investigation revealed it to be very similar to *Oidium matalense*.

Acute tonsillar hemisporosis.—I am indebted to Dr. Spaar for the clinical notes of the following case. European planter, admitted to the Kandy Hospital on May 2nd, 1913. The illness had started two weeks previously. Temperature on admission 101°. Complained of severe pain in the throat and of difficulty in swallowing. Flushed face; felt extremely weak and exhausted. Voice thick and nasal. Swallowing painful and difficult. Fluid regurgitated through nostrils. There was a profuse flow of saliva. The muscles of the neck were rigid, submaxillary glands enlarged and painful. The patient was unable to open the mouth wide. Tongue thickly coated and dry; soft palate swollen. Greyish membranes were present on the left tonsil, left anterior pillar, and soft palate. Diphtheria antitoxin (2000 units) injected the same day into the flank and a spray of hydr. perox. prescribed. During the next four days the general condition improved, but the white-greyish membrane in the cleft between the left tonsil and the left anterior pillar was still very evident. Nine days after admission there was still a small whitish patch visible, but the patient felt quite well and was discharged the following day.

Dr. Spaar sent swabs taken with all possible precaution to me for examination. In smears made from the swabs no bacilli were seen, a few cocci were present, and numerous large mycelial segments of a fungus. Serum tubes and glycerine-agar tubes were inoculated as usual, and, given the presence of mycelial threads, also several sugar agars. The serum and glycerine-agar tubes did not show any growth of the diphtheria bacillus; instead there was growth of a fungus with a peculiar crinkled surface which I had found previously in 1909 in a case of bronchitis. I was uncertain about its classification, and placed it temporarily in the genus *Monilia*, and called it *Monilia rugosa*. However, I sent cultures of the fungus to Professor Pinoy, of the Pasteur Institute, who, after a long botanical investiga-

tion, came to the conclusion that the organism belonged to the genus *Hemispora*. The correct name of the fungus became therefore *Hemispora rugosa* (Cast.). During the war I have seen several cases of acute tonsillo-mycosis in the Balcanic-Adriatic zone, and recently a case in Paris, and a case in this country.

MYCOTIC AFFECTIONS OF THE NERVOUS SYSTEM AND OF ORGANS OF SPECIAL SENSE.

In 1904, from the pus of a cerebellar abscess, I grew an extremely delicate fungus, a nocardia which was Gram-positive and partially acid-fast. No club-like formations were present in microscopical preparations. This nocardia grew comparatively well on sugar media, very slowly and scantily on ordinary agar. On all media the colonies had a black pigmentation. Abscesses of the brain and cerebellum due to true actinomyces have been described by several authors. In cases of general infections due to saccharomyces, monilia, and endomyces-like fungi, abscesses containing such fungi may be found in the brain and spinal cord, as in other organs of the body.

Organs of special sense.—Mycological affections of the eye may be classified as follows: Due to species of genus *Nocardia* and genus *Cohnstreptothrix*, ocular nocardiasis. Due to various species of—

Genus *Saccharomyces*, *Cryptococcus*, *Endomyces* } = Ocular blastomycosis.

Due to fungi of genus *Monilia*, ocular moniliasis.
Due to fungi of genus *Oidium*, ocular oidiomycosis.
Due to fungi of genus *Aspergillus* and *Penicillium*, ocular aspergillosis and penicilliosis.
Due to fungi of genus *Sporotrichium*, ocular sporotrichosis.
Due to fungi of genus *Glenospora*, ocular glenosporosis.

The commonest mycological affection in Ceylon is moniliasis. I have seen several cases in Singhalese children of a conjunctivitis apparently due to a monilia; the conjunctiva was highly inflamed, there were photophobia and purulent discharge. The microscopical examination showed in addition to pus cells, numerous yeast-like bodies. No gonococci or any other bacteria were present. Agar and various sugar-agar tubes were inoculated with the pus, and a monilia fungus was grown. It is to be noted that not rarely, at least in the tropics, spores of various fungi are found in the slight secretion which so often collects at the angles of the eyes even in normal people, but these spores do not, apparently, usually give rise to any symptoms.

Rhinomycoses.—Yeast-like and other fungi are often observed in the nasal mucus; they may play only a saprophytic rôle or they may give rise to an inflammation of the mucosa. In Colombo a little native boy was brought to me by his parents, who stated that he had been suffering for the last three months from repeated attacks of severe sneezing, and that they had observed that on blowing the nose minute black dots were coming out in the mucus. Microscopical and cultural investigations showed this case to be one of aspergillosis due to *A. niger*. In the literature cases of aspergillosis of the nose due to *A. glaucus* (De Bary) and *A. fumigatus* (Fresenius) have also been described.

Otomycoses.—Various fungi may be present in the external auditory canal without causing any symptom. In some cases, however, the fungus multiplies abundantly, and may be the cause of a local inflammation or may apparently facilitate the formation of a wax plug. In several cases I have found a monilia which I have called *M. rhoi*. It two cases of otomycosis I have found a fungus belonging to the family *Mucoraceæ*, *Lichteimia ramosa* (Lindt., 1886). It was present in great quantity, and the patient complained of tinnitus aurium and deafness. It is interesting to note that this fungus is found often in the nasal mucus of horses, and both my cases were Tamil *muttus* (horse-keepers). Various authors (Siebenmann, Boke, Huckel, &c.) have recorded cases due to *Lichteimia corymibifera* (Cohn), *Rhizomucor septatus* (von Bezold); Maggiora and Gradenigo found *Saccharomyces ellipsoides* (Rhees) in a case of chronic otitis media. The same authors found a new species of saccharomyces (*roseus*) in the Eustachian tube.

Aspergillomycosis of the ear is comparatively frequent; I have seen several cases in Ceylon, apparently due to *A. fumigatus* (Fresenius); Cramer observed *A. niger* (von Tiegham); Wreden, *A. flavus* (De Bary); Siebenmann, *A. repens* (De Bary); and *A. nidulans* (Eidam). Fungi of the order *Basidiomycetes*, family *Ustilagineæ*, have also been observed; *Ustilago carbo* and *Tilletia levis*. Of the order Hyphomycetes, *sensu stricto*, *Tricothecium roseum* (Persoon, 1801) has been observed in a few cases.

I may here mention that the best treatment I have found for the various forms of otomycosis is syringing with hydrogen peroxide 2 parts and alcohol 1 part.

CERTAIN MYCOSES OF THE GENITO-URINARY SYSTEM

Urethritis of hyphomycetic origin.—In the tropics and in the Balkans I have come across several such cases, which in my experience may be classified as follows:—

1. Discharge whitish or yellowish—the causative fungi generally belong to the genera *Saccharomyces*, *Monilia*, *Cryptococcus*, *Oidium*.

2. Discharge dark brownish or greenish-black, or black: These cases are generally due to fungi of the genus *Cladosporium* (*Foxia*), *Aspergillus*, *Penicillium*.

3. Discharge reddish or pinkish: Generally due to the red-pigment-producing fungi of the genera *Cryptococcus*, *Saccharomyces*, and *Monilia*. At times two organisms are found: a higher fungus such as a monilia, and in symbiosis with it a red-pigment-producing coccus or bacillus.

I may quote the following cases illustrating the various clinical types I have mentioned:—

Mycotic urethritis with yellow discharge.—A young Serbian officer in Macedonia consulted me for a fairly abundant purulent urethral discharge. The patient was greatly distressed: he was engaged and believed he was suffering from gonorrhœa, though he denied having exposed himself to infection. I examined the secretion: no gonococci present; instead a very large number of yeast-like cells and a few mycelial filaments could be seen. The cultural investigation showed presence of a monilia very similar to *M. krusei*. I prescribed a mixture containing pot. iod., soda bicarb., glycer., syr. of tolu, and irrigations with a solution of perchloride of mercury 1 in 20,000. The discharge disappeared completely within ten days.

Black mycotic urethritis.—An old Tamil coolie came to the Colombo Clinic in January, 1906, complaining of black urethral discharge dating from several months back. He stated that he had not had sexual contact for several years. The secretion was blackish and contained numerous small granules, which on microscopical examination were seen to consist of mycelial threads and spore-like bodies. Various sugar media were inoculated and a fungus was grown, producing a black pigmentation, and very similar also in other characters to *Cladosporium mansoni* (Cast.). In two other clinically similar cases, one in a native and the other in a European, I found aspergillus-like fungi.

Red discharge.—A little Singhalese boy, 6 years old, was brought to my clinic in Colombo by his parents because they believed he was passing blood from the urethra. The discharge, examined microscopically, consisted of some leucocytes and numerous budding cells. Several sugar-agar tubes were inoculated and a red-pigment-producing cryptococcus was grown. The child was given an alkaline mixture, and instillations of diluted glycerine of borax were carried out. This, however, did not improve the condition. Urethral injections of a solution of perchloride of mercury, 1 in 20,000, were then made and a speedy cure resulted.

Very similar mycological conditions of the female genito-urinary organs may be observed, and cases of vaginitis and vulvo-vaginitis due to fungi of the genus *Monilia*, *Cryptococcus*, *Aspergillus*, *Penicillium*, and *Cladosporium* have been recorded; and as the same fungi are found in urethral and vaginal discharge, it cannot be excluded that in certain cases these mycological infections may be contracted by sexual intercourse. When the monilia-like and saccharomyces-like fungi are the causative agents two clinical varieties may be distinguished. In some cases thrush-like patches are present on the mucosa (vaginal thrush); in others no such patches are present, but the discharge is purulent, very thick, and, in my experience, these

latter cases have not rarely been mistaken for gonorrhœa. In 1914 the surgeon in charge of the Colombo Lying-in Home had a case in which a pelvic operation was urgent; a thick purulent vaginal discharge was, however, noted, and he felt inclined to postpone the operation. A specimen of the discharge was sent to me with the request to examine it for gonorrhœa. No gonococci, however, were found, instead an enormous amount of mycelium and conidial elements. Further investigation revealed the fungus to be *Monilia pinoyi*, Cast. Cases of hypomycetic vaginitis are found, though not so frequently, also in temperate climates, and Taylor and myself have placed on record several such cases. It must be added, however, that finding fungi in vaginal mucus is nothing new; one may read in THE LANCET of as long ago as 1840 (p. 448) a paper by Wilkinson with the following title: "Some Remarks upon the Development of Epiphytes with the Description of a New Vegetal Formation found in connection with the Human Uterus."

A Presidential Address
ON
MATERNITY AND CHILD WELFARE WORK.

Delivered at the First Meeting of the Society of Medical Officers of Maternity and Child Welfare Centres at Bedford College, Regent's Park, on March 26th, 1920,

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LADIES AND GENTLEMEN,—My first duty is to thank you for the honour you have done me in electing me as the first president of this society. I hope that as a society it will soon display a vigorous existence, with a momentum of its own, owing no more than is necessary to the exertions of any particular individual or group of individuals. That, I think, is the criterion of healthy existence in such a society as ours. Nevertheless, in order to set the ball rolling there is need, in the first instance, for the help of a small number of enthusiasts, some in London and some in those other parts of the country where, from time to time, it may be decided to hold meetings. I hope that ultimately, all over the country, there may be arranged pleasant and informal meetings between the medical men and women who are interested in various phases of maternity and child welfare, meetings at which the clinical aspects of the work may be freely discussed, meetings from which we may catch something of each other's enthusiasm and by which the practice of each of us may benefit from the experience of all. For such coöperation between us the time, I think, is already overdue. I need not say that I am a strong believer in the possibilities for good which are inherent in the movement for maternity and child welfare, nor am I in the least inclined to regard the results which have been achieved so far as altogether insufficient or unsatisfactory. Great progress has been made. Visible success has crowned efforts which have deserved it. This country of ours enjoys certain advantages over all other countries which have made possible the surprising developments of the work in the last few years. In the first place, in no other country has the Government shown so much appreciation of the importance of the subject or extended the same recognition and assistance. In the second place, in no other country was there already in existence before the movement started a Public Health Service in any way comparable in scope, organisation, and efficiency to that which was established here, and which was able to take under its control from the first a very large part of the management of the new movement. I think the possession of these two advantages accounts very largely for the rapidity with which the work has progressed during the last few years—a rapidity of which we may well be proud; and so, if in what I have to say I speak no more of the success the movement has achieved, but confine myself to deploring some things which seem to me a source of weakness and an impediment to progress, you will understand, I feel sure, that it is not because I do not recognise the value of what has been accomplished, but only because I desire to see the movement forward accelerated.

THE CONFUSION BETWEEN CURATIVE AND PREVENTIVE WORK.

Now, in the first place, I believe very strongly that success is denied to a very large number of centres because the distinction between curative and preventive work is not recognised. Under the name of "Infant Welfare Work" more often than not there are combined three separate branches of activity. Many infant centres do not confine themselves to the care and inspection of healthy children, to supervising their management, diet, and clothing, to encouraging breast-nursing and perfecting its technique, and to educating the mothers to an appreciation of health and pride in it. They prefer to act, or are forced to act, as well, at the same place and time, as centres for treatment, especially inviting the attendance of children already suffering from malnutrition or infection. With these two different and entirely incompatible functions is commonly combined a third. They act as distributing centres for doles of milk, food preparations, or clothing, dispensed free of charge or at reduced prices. Now, in my opinion, it is very easy to recognise the deplorable result of this admixture of functions. The mothers and the general public are confused in their notions as to the object and aim of the welfare centres. I should like to see displayed in every centre a statement that we doctors are generally powerless to undo all the ill-effects of chronic infantile ailments, but that, with the help of the mothers, we can do much to prevent them. It was because of the complete and proved failure of hospital out-patient departments and dispensaries in this respect that we were led to investigate the possibilities of preventive institutes, and found them of value. If sick and ailing babies are to be seen side by side with those that are thriving it is to be expected that the sick will monopolise time and attention to the exclusion of the healthy, and inevitable that many mothers of healthy children will then ask themselves of what use it is to continue attendance. I fear that mothers generally have little idea of the true purpose of a centre. To too many of them they are places to which they may take the baby for advice and treatment when a long process of faulty management has finally resulted in infection. I am not unmindful of the needs of the children whose health is permanently below par. No doubt both the sick and the whole need a physician, and the same organisation and the same building may have to be used for both purposes. But in all that we do it seems to me necessary that we should see to it that the distinction between the healthy and the ailing is clearly impressed on every mother. We may define the healthy infant as the infant who, upon the breast or upon some suitable artificial diet, proves itself capable of a steady gain in weight and of acquiring its several functions in due time. Such an infant we may be confident is acquiring day by day an increasingly high resistance against infective disorders of all sorts. If the weight fails to increase during a period of some weeks, or has fallen for any reason more

than 25 per cent. below the average, or if progress is persistently unsatisfactory in any other way, then, I think, that child should fall from the category of the healthy to that of the sick. I think the hours of attendance of the sick should be different, and that the mother should understand the reluctance with which we have to transfer her child from the one department to the other. Only when the child has again shown its power to thrive and gain in weight, without medicinal treatment or any profound modification from the standard diet of health, should it be readmitted. The whole atmosphere of the two services must be different. Among the healthy children the note must surely be that of congratulation, and admiration, and delight. When the child has to be transferred to the treatment clinic there may be hope and encouragement, and sympathy and a concentrated effort to produce better results, but there can be little of the light-heartedness that is so essential in the other. A blue ticket for health and a pink one for failure with different days of attendance, and the contrast in the whole tone and atmosphere will, I think, do more than anything else to help the mothers to realise what we are aiming at. Yet the Ministry of Health in its latest Memorandum, while expressing the hope that the essentially preventive aspect of the work will not be lost sight of, suggests that the syphilitic infant may well be treated in the welfare centre—a sort of death's head at a feast. To mix the sick with the healthy is to obscure any good effects obtained; to cast a shadow of disease and death over what was meant to be a place of health. I make the same criticism of the observation wards annexed to centres. I know that they are said to be for infants only slightly ill, but who can tell the slight illness of to-day in the young infant from the fatal illness of to-morrow? In these observation wards there must occasionally be failures and deaths, and an infants' centre is the last place which should be associated, in the minds of the public, with death. Nor can the reputation of a centre support such a disaster. A centre serves a comparatively small area of adjacent streets. One or two deaths will evoke comments and criticisms which may outweigh the credit earned by a year of patient work. Indeed, I think the observation ward should be removed as far as possible from the centre, and should have no apparent connexion with it. Before the child is admitted it should have ceased to be numbered among the healthy infants attending the centre.

THE CENTRE AS A DISTRIBUTER OF GIFTS AND DOLES.

To the other functions which it has become the rule for the infant centres to assume that of a distributing centre for milk or clothing or various drugs and preparations, for which no charge, or only a nominal charge, is made, there are, to my way of thinking, also very grave objections. It is not to the good of the cause that mothers should be attracted by what they may be given. I have heard of instances where mothers attend more than one centre to receive double gifts. I have heard of instances where mothers have been attracted away from one centre to another because it has more to give. The centre should know of the provision of these gifts and should recommend suitable cases to apply in order to participate, but there should be nothing to suggest that their provision is a bribe offered to mothers to attend centres. Are mothers at one centre to be urged to make garments and taught to do so, and at another are they to be given a complete outfit for 6*d.*?

"The centre is worth as much as the presiding physician" is a saying of Budin, quoted with approval by the Ministry of Health in the Memorandum referred to above. I can imagine nothing more calculated to lower the worth of "the presiding physician" than the suspicion that the mothers are there, not in response to what he or she has to offer, but in order to participate in the bounty. If drugs and widely advertised foodstuffs are to be dispensed, then it is to the drugs and foodstuffs that credit will be given. But if a mother does not realise that any good result is due to her own exertions, guided and inspired by the physician, then our labour is in vain. In the past few years our work has moved rapidly. In these two particulars especially I submit to you the movement has been in the wrong direction, and the original aim and purpose of our work have been lost sight of.

THE RELATION OF HEALTH VISITOR AND MEDICAL OFFICER.

In the second place, I desire to consider shortly the part which is nowadays played by trained health visitors and trained nurses in infant welfare work and their relation to the medical officer. Here, also, there has been, of recent years, very great development, and no one, I think, would venture to say that the direction has here been retrograde. It is right that these workers should be trained as highly as possible, and should know something of the rudiments of hygiene, physiology, and dietetics. To very many of them, in addition, is given a keen understanding, tact, sympathy, and unfailing patience. But while medical officers recognise their value and admire their efficiency, we must be careful, at the same time, to define very accurately the nature of their duties and their responsibilities. They must not be regarded as adequate authorities in one of the most difficult branches of medicine. Unless their work is controlled and inspired by a medical officer with knowledge infinitely greater than their own, then that work will not often prove efficient, and not infrequently all their efforts will do more harm than good. We must not be misled by the analogy of the midwife, who has to be trained only in certain definite manipulations and can be left to carry on her work unaided to a great extent. I would point to the work of Dr. Truby King as an instance of the inspiration which the trained health worker and trained nurse can catch from the expert medical officer. Now, if I may say so, I think that some of Dr. Truby King's work was open to criticism. To my way of thinking he did not sufficiently differentiate between preventive work and curative or therapeutic work, and he seems to me at times apt to ascribe to his dietetic prescriptions success which was really to be ascribed to the high standard of hygiene and nursing in his hospital, and, still more, to the power of his own dominating personality acting upon the mothers. With him it was often the prescriber rather than the prescription which was effective. But no one with whose work I am acquainted approaches near to Dr. Truby King in his power of vitalising the routine work of his assistants and subordinates, and of filling them with his own confidence and power for good. Dr. Truby King, if he were here, would not resent my remarks I feel sure. His work has been so great that it can allow each one of us to deduct what is displeasing to him without doing it much damage. Now, no one, I think has studied the work of others more carefully than Dr. Truby King. In all countries, in the States, in this country, in France, in Germany, he has sought and found inspiration in the work of others, and when he has found it he has handed it on to all who are associated with him. Let there be no mistake about it, the success of the whole movement depends, not so much on the training of health visitors, so much discussed at present, as upon the training, capacity, and enthusiasm of the medical officers. The value of the visitor depends upon the use the medical officer can make of her. We have behind us a Ministry of Health which is sympathetic, and which, if it could always do what it wanted, would, I think, always act wisely. We have a magnificently organised Public Health Service to work with; we have a better educated and a more understanding body of health visitors and trained nurses than any other country, and with all these advantages, have the medical officers of centres as a whole throughout the country occupied the position they ought to occupy? I know that there are innumerable and admirable exceptions, but in far too many instances it is taken for granted that anyone will do for an infant centre. The medical officers at present are a heterogeneous body. Young and recently qualified officials, who know little of children in sickness and still less of children in health, whose opinion can carry little weight, either with the mothers or the health

visitors, men skilled in general practice, who find the absence of pathological interest unstimulating, medical officers of health who, though very well versed in the study of faults of environment, have less knowledge of the common reactions of the child to these faults, and whose manifold duties only permit them to maintain a nominal control over the health visitors who are left to pursue the work according to their own ideas. None of these is likely to conduct an infants' centre satisfactorily. Still less is the young practitioner who finds the income which can be culled from perfunctory attendance at one or more centres useful to live on while experience is acquired in some speciality which is more attractive. From none of these, and they are far too numerous, will the work gain credit.

THE DIFFICULTIES OF THE WORK.

But I wish to speak only of those of us—happily the greater number—who are in earnest in our endeavour. Our task is very difficult. There is no speciality more neglected in our schools and our universities than that of the study of childhood. It is a subject which it is difficult to learn, difficult to teach, and difficult to write about. The literature is not adequate to the theme. Certainly the text-book for medical officers of centres has yet to be written. It is not open to many of us to tour the country and visit other centres in search of inspiration and knowledge or to indulge in a wander year abroad. But I feel sure it is due to the relative isolation in which we work that so little clinical observation of value has proceeded from infant welfare centres, and that the advice given at different centres is often so flatly contradictory. We must urge the institution of undergraduate and post-graduate courses, though I am not at all clear who is well fitted to conduct them. Salaried appointments are now so numerous that a special diploma in child welfare must shortly be instituted and carry with it better pay. But above all I think we should join together for free discussion among ourselves. We have the reputation of a young speciality to make, and there is no good blinking the fact, it is not made yet. We are not yet equal to our opportunities. To deal wisely and successfully with each mother and each child calls for professional gifts of the very highest order. To determine, in each case where success is hanging in the balance, how far inherited tendencies or congenital weakness is responsible; how far dietetic errors, whether excess or quantitative faults in the construction of the diet; how far faults of management and handling; how far infection and of what parts—all this demands a wide experience. Moreover, since it is through the mother and by means of her alone that we can work effectually, the study of the mother must be as intimate and careful as the study of the child. She must be inspired with full confidence in us; she must be allowed free speech, and every word that she says is of importance if only we can find the key to the riddle of her cryptic sayings. Always she has observed aright; seldom can she describe what it is that she has observed, and to this she must be helped. Only when she has had her say is it the turn of the medical officer to expound and draw the moral. The explanation offered should fit all the facts, and it should fit them so accurately as to carry conviction. Let me finish with a concrete example to illustrate my meaning. A child suffers with constipation and pain on defæcation, with loud and prolonged crying when put to stool. As the mother talks one learns that the same resistance is shown to taking food. Although urged and coaxed, the child resolutely refuses to eat meat, or greens, or milk pudding. On being put to bed there is crying and resistance, and sleep is refused for many hours. One learns, too, that the so-called constipation is quite uninfluenced even by the strongest purgatives, unless actual diarrhœa is produced. On the other hand, when the child visited an aunt in the country, the mother of a large family, the constipation disappeared for the time being, to relapse on his return to London. The mother is much distressed by the child's complaint, and shows a disposition to cry even when talking over it. She has no other children. The so-called constipation and painful defæcation are here but one of many instances in the daily life in which that child shows the common symptom of nervous unrest in childhood, "negativism." Habitually he does the opposite to what he is so urged and appealed to to do. His little mind has been concentrated on the difficulty. His mother's over-anxiety has communicated itself to him. The action and interaction between mother and child have produced a neurosis which can easily be overcome if matters are explained and helpful suggestions are made to the child by a mother whose confidence has been restored. In that complaint of constipation how numerous are the points that we must explore. We have to try to determine if there has been lack of training and want of routine, or whether there has been excess of training, excess of insistence, and over-anxiety, as in the instance quoted. Or, again, is the constipation symptomatic of inanition and underfeeding, or is it due to faults in the construction of the diet, such that the fermentative processes in the intestine are too little developed and the putrefactive processes encouraged? Or is it more a question of what Dr. A. F. Hurst calls "dyschezia"—difficulty in the mere muscular act of defæcation from abdominal distension and general muscular malnutrition? To control this and many more difficult disturbances a routine dose of olive oil or syrup of figs will certainly not be sufficient.

CONCLUSION.

To deal with the hundreds of such problems which present themselves in our daily work requires understanding and requires time. Without free speech on both sides, from mother and from doctor, nothing will emerge. It is easy to pour out stereotyped good advice on points of hygiene and diet; it is easy to laugh at or deplore ignorant, fanciful prejudices of the mother; it is easy to dabble in laxatives and cough mixtures, to confiscate all dummies and most prepuces—easy, but quite ineffective. To be understanding with the mothers, to inspire and make useful the work of assistants, to train oneself to greater usefulness—none of these things are easy. Can we not help each other best by free discussion amongst ourselves?

THE TREATMENT OF SYPHILIS BY THE ANTISYPHILITIC SERUM OF QUERY.

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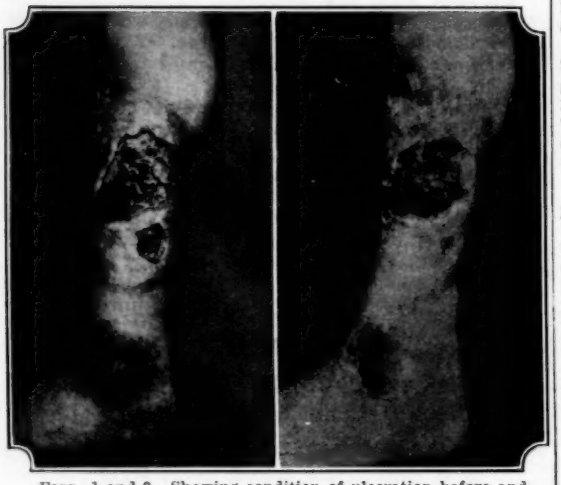
THE value of mercurial preparations in the treatment of syphilis is undoubted, but their action is limited to certain stages in the course of the disease. The utility of mercury in the later manifestations of syphilis of the nervous system, such as tabes dorsalis and dementia paralytica, is very slight; not only does it fail to retard the progress of these diseases except in the very slightest degree, but it also fails even to give relief to the more obvious and distressing symptoms, such as lightning pains, progressive optic atrophy, or ataxia.

Salvarsan and its various preparations have, in our hands, been equally ineffective. While in the early stages of syphilitic infection salvarsan has a markedly destructive action on the syphilitic virus, it often fails entirely to prevent relapses, and later involvement of the nervous system is only too frequent. Not only are the later nervous manifestations of syphilis resistant to mercury, salvarsan,

and the iodides, but certain gummatous ulcerations of the skin are equally unaffected, and may be treated for months without benefit by the usual remedies.

In view of the remarkable results reported from France of treatment of syphilis by Dr. Query's serum, a trial of the serum was made in the dermatological department and in cases of nervous disease at the London Hospital. Dr. Query states that his serum is prepared by inoculating monkeys with the filtered cultures of the organism of syphilis on bouillon. When the serum of the monkeys gives a strong positive Wassermann the animals are bled and the serum is collected and preserved in ampoules. Metchnikoff and Neisser had attempted to prepare an antisyphilitic serum by inoculating monkeys with the culture of Schaudinn's spirochætæ, but Query used the toxin prepared from filtered broth cultures.

The following cases were treated with Query's serum after complete failure of the recognised methods of treatment to relieve their symptoms. The relief of symptoms produced by the serum was marked, but it is, of course, impossible to speak of the permanence of the cure until the cases have remained under observation for some years.



FIGS. 1 and 2.—Showing condition of ulceration before and after treatment with Query's serum.

CASE 1. *Gummatous ulcers of the leg of long standing, with hyperkeratosis and deafness.*—M. R., aged 69, first attended the dermatological clinic of Dr. Sequeira for tertiary syphilitic ulceration of the left leg on Dec. 12th, 1917. Hyperkeratosis around the left ankle was well marked. The patient was very deaf. She was treated by injections of salvarsan, neokharsivan and galyl, and in all received 11 injections between Dec. 14th, 1917, and Sept. 9th, 1919. In all 4·5 g. of arsenobenzol were injected. During each period of injection she had rest in bed and local treatment with fomentations and antiseptic dressings. From Dec. 21st, 1917, to Dec. 4th, 1919, she received in addition mercury and iodides internally. Comparison of photographs in December, 1917, and January, 1920, showed that no progress had been made in the healing of the ulcer. The patient was still very deaf and the hyperkeratosis round the left ankle was still present.

Treatment with Dr. Query's serum was commenced on Jan. 28th, 1920, when the serum was injected subcutaneously over the right biceps; the patient was not put to bed. A dry dressing was the only local treatment and the patient continued her ordinary avocation of charwoman. By Feb. 11th 20 injections of serum had been given and new photographs were taken, one of which (Fig. 2) may be compared with Fig. 1, taken before treatment with the serum was started. The larger ulcer is now filled up with red firm granulation tissue and has a dry glazed surface. The smaller ulcer is now flush with the surface and is smooth and dry to touch. The hyperkeratosis around the left ankle is markedly less, and in addition the patient's hearing has now become normal.

Dr. Sequeira made the following note on March 3rd, 1920. "This case had proved intractable to treatment by intravenous injections of arsenical compounds and by mercury and iodides internally. The improvement which followed the injections of Dr. Query's serum was remarkable, the ulcers are filled up and contracted, but the most striking feature was the recovery of the patient's sense of hearing. In view of these observations I am anxious to extend the use of the Query treatment to other cases of this intractable type."

CASE 2. *Tabes dorsalis with pronounced ataxic symptoms.*—B. G., aged 47, contracted syphilis in 1891. For the past ten years he has suffered from severe lightning pains in his lower limbs and occasional incontinence of urine. For the past four years he has had great difficulty in walking and can just hobble about with two sticks. Romberg's sign is very marked. When his eyes are closed he is quite unable to stand and falls over at once. He showed the typical tabetic gait, the knee-jerks were absent, and Argyll Robertson pupils present. The Wassermann test on Jan. 15th, 1919, was positive. A long course of mercury and iodides had failed to give any improvement and the ataxia was getting rapidly worse.

Starting from Feb. 14th, 1920, 5 intrathecal and 20 hypodermic injections of Query's serum were given. On March 14th there was a marked improvement in the patient's gait. He walked quite easily without his stick at a good pace. Romberg's sign was absent and he walked easily up and down the ward with his eyes closed.

CASE 3. *Tabes dorsalis with intractable lightning pains.*—J. H., aged 52, had suffered for ten years with violent darting pains in the legs, so severe that she had threatened to commit suicide. She had had a long course, over two years, of mercurial and iodide treatment. From August, 1919, to January, 1920, she received nine intravenous injections of salvarsan. The pains were no better; in fact, were steadily getting worse. On examination in February, 1920, the knee-jerks and ankle-jerks were found to be absent. The Wassermann reaction was strongly positive. The pupils were normal. She had had one miscarriage and no children. The only way the patient could obtain relief from the pain was by taking 7 gr. tablets of pyramidon. She took as a rule 35 g. a day to keep the pain under control. After seven injections of Dr. Query's serum the frequency and severity of the pains had markedly diminished, so that she was able to get through the whole day without resorting to the pyramidon. Her general condition had also improved.

Remarks.

For this preliminary note on the treatment of syphilis by Query's serum cases have been selected with prominent symptoms of the tertiary stage which have proved resistant to the recognised methods of treatment. The manner in which these intractable symptoms have been at once relieved by Dr. Query's serum is most striking, and, in our opinion, the serum deserves a thorough further trial in the treatment of the tertiary stage.

CENTENARIAN.—**The death of Mrs. Sarah Evans**, Llandysiliogogo, South Wales, aged 102 years, is announced.

LITERARY INTELLIGENCE.—**Under the title** of "Diathermy in Medical and Surgical Practice" Dr. Claude Saberton, honorary radiologist to the Harrogate Infirmary and to the Royal Bath Hospital, Harrogate, has written a guide to students and practitioners who wish to master the technique. The book is announced by Messrs. Cassell and Co. for early publication as an addition to the Modern Methods of Treatment Series.

RECURRING SARCOMA OF THE SMALL INTESTINE.

BY W. H. BATTLE, F.R.C.S. ENG.,
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ONE of the latest and most informative papers on the subject of sarcoma of the small intestine is written by Dr. John Speese.[1] It is probable that the round-celled growths form about 50 per cent. of the various forms in which it appears, and the site is usually the ileum. From the fact that an actual closure of the lumen of the bowel is seldom met with, and the contents of it can pass until a late period, operation, which is usually for obstruction, is done when the disease is advanced, and the tumour, which has a tendency to drop into the pelvis, is only discovered when the patient is on the operation table. Its progress before discovery and pelvic position lead to involvement of the bladder in many.

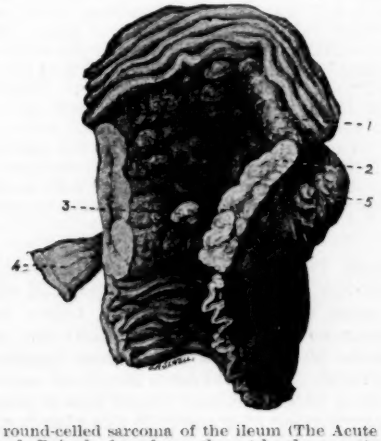
The importance of intussusception in the previous history is recognised, for many cases are published in which the intussusception was started by a growth. Kassmeyer collected 284 instances of this, of which 85 were malignant—59 carcinoma and 26 sarcoma. The symptoms are, however, usually chronic, and not those which are pathognomonic of the ordinary intussusception. In the case described below no tumour was found, nor did the sarcoma develop at the site of either of the attacks of intussusception. In the second attack a thickening was found, of an inflammatory character, at the apex of the intussusception, but when operation was performed 5½ months later for the growth it had not increased but diminished in size.

First attack of intussusception.—F. R., a girl, aged 8, was admitted to St. Thomas's Hospital on May 17th, 1913, with abdominal symptoms. For 24 hours she had suffered great pain in the abdomen, with frequent vomiting. Nothing had passed by the bowel during that time. She looked pinched and was evidently very ill. Temperature 100° F., pulse 100, respiration 24. She was subject to constipation. Examination of the abdomen showed a movable irregular mass in the right side; the iliac fossa below felt empty (signe de Dance) and was tender on pressure, but the abdominal wall was everywhere soft. Examination per rectum showed nothing abnormal. The abdomen was opened through the right rectus muscle (separation of fibres) and a large ileo-colic intussusception reduced with some difficulty after it had been brought outside. A hard button-like patch was left at the apex. She left on May 30th, recovery having been uneventful.

Second attack of intussusception.—On June 28th she returned from a convalescent home. Next day she had abdominal pain and vomiting; the bowels acted twice, but there was no slime or blood in the motions. The attacks of pain were severe and intermitting, causing her to roll about and cry out. The abdomen was rather distended. There was no visible peristalsis. On the 30th the bowels had not acted, although a glycerine enema had been given. In the afternoon the abdomen was reopened along the line of the old scar. The small gut was considerably distended and there was some clear serous fluid in the peritoneum. The mesenteric glands were enlarged. The intussusception was 2–3 ft. above the ileo-cæcal valve and about 4 in. long. It was easily reduced in part; the last portion was, however, much thickened, and a complete reduction was impossible, firm adhesions extending between the peritoneal surfaces. The intestinal contents passed this section with difficulty. Lateral anastomosis above and below this point was performed. The mucous membrane at the loop when examined through one of the incisions appeared somewhat swollen and sloughy. There was no evidence of tubercle, and von Pirquet's test was negative. She left the hospital well on July 26th.

The subsequent history of this patient is most interesting.

First excision of growth.—On Dec. 14th of the same year she came to the ward in which she had previously been a patient to request permission to be present at the usual ward festivities at Christmas. Whilst at the hospital she had an attack of abdominal pain and vomiting. Examination showed the patient to be suffering from some degree of distension of the abdomen, with peristalsis. A history of similar attacks over a period of three weeks was obtained. She was detained, and an operation performed the same afternoon. The line of the previous incisions was selected as it was not very strong. Some thickening could be felt under the upper end of the scar, and this proved to be the apex of the intestine forming the part which had been short-circuited at the second operation. There were one or two adhesions between the omentum and other parts, and when the pelvis was explored a tumour was found which was adherent to the summit of the bladder. It was some distance from the point of lateral anastomosis, encircled the small bowel, but did not quite occlude its lumen. The wall of the bowel above and below could be pressed into it, its shape, internally, resembling that of a dice-box. There was a bag of omentum adherent to it. (See figure.) The



Primary round-celled sarcoma of the ileum (The Acute Abdomen, p. 254). 1. Raised edge of growth, not hard or everted. 2. Base extending to and involving peritoneum. 3. Area which had given way. 4. Omentum closing opening. 5. Part cut away from bladder. Messrs. Constable and Company have kindly supplied the illustration.

mesenteric glands were enlarged over a large area. After extension of the incision in the abdominal wall it was found possible to cut away the growth from the summit of the bladder, the wall of which was then sutured. The portion of gut affected by the growth was excised and the incision carried into the mesentery so as to remove as many glands as possible, and an end-to-end anastomosis carried out. The glands were much too numerous for a complete operation. The liver was normal. The small intestine above the growth was dilated and congested, that below smaller than normal, but there had evidently been no complete obstruction. There was a good deal of shock after the operation, but the bowels acted on the 17th, and there were no abdominal symptoms.

Mr. Shattock reported that the growth was a round-celled sarcoma. At one point the growth had necrosed and here the omentum was adherent externally, so preventing extravasation of contents. On Jan. 20th, 1914, exploration was again performed to see if it was possible to excise any of the enlarged glands, but although some of them were smaller they were extensively affected, and one or two nodules of growth could be felt. Ten days later the use of Coley's fluid

[1] Annals of Surgery, May, 1914, p. 727.

in increasing doses was commenced. She left for a convalescent home at Shooter's Hill (D'Erlanger), the treatment was continued by Dr. J. G. Duncanson, and she improved and put on weight. The patient was examined from time to time, and although there was no apparent disease in the abdomen it was considered advisable to readmit her with the view of a further course of Coley's fluid. She was under treatment from Jan. 1st to March 31st, 1916. There was some reaction to Coley's fluid, but nothing excessive. She was readmitted on July 14th, 1916, complaining of abdominal pains of a colicky nature, without vomiting, which came on about once a fortnight. In addition, examination of the abdomen showed the presence of several nodules the size of acorns, also increased resistance in the lower part and towards the right.

Second excision of growth.—As it appeared probable that there was growth causing some obstruction an exploration was done five days later. A large mass, involving the small intestine about 6 in. from the cæcum, was found in the right side of the pelvis. This was apparently a recurrence which had spread from the lymphatics or glands bordering on the former section of mesentery, there being a swelling larger in the mesentery than the portion which encircled the intestine. As a resection of the growth with a wedge-shaped piece of the mesentery involved division of the bowel close to the ileo-cæcal valve, it was thought best to close both ends and join the lower end of the ileum by lateral anastomosis to the lower part of the cæcum. Many glands were scattered about the mesentery, and these were the nodules which had been felt through the abdominal wall. There were no separate nodules anywhere independently of the glands, and the bladder was normal. The lumen of the gut was narrowed to the size of a little finger. This patient has been kept under observation, and the resident assistant surgeon, Mr. P. H. Mitchiner, tells me that there is no evidence of recurrence at the present time (March 30th, 1920). She has grown considerably and enjoys good health, but the abdominal wall on the right side is thinned from atrophy of the rectus muscle.

Remarks.

Although it was recognised at the first operation that the growth was a sarcoma, and that the glands were secondarily affected, these enlargements were so generally diffused that any attempt to extirpate them would have been hopeless and probably fatal. It would have involved removal of many feet of intestine, and there was a possibility that dissemination of growth in the glands was not so extensive as appeared. Another reason against doing more was the presence of one or two lumps in the peritoneum, which appeared to be growths of a character similar to the original one. An interesting feature in the case is the delayed recurrence, its removal, and the unusual prolongation of life which has followed treatment. Some credit for this (I am of opinion) must be attributed to the use of Coley's fluid after operation. Even now, nearly seven years since the beginning of her abdominal history, she appears in good health. The illustration shows the value of the omentum in intestinal perforations.

ERRATUM.—In the last issue of THE LANCET, p. 876, in an annotation on Dr. F. G. Cawston's paper on the "Treatment of Bilharzia Disease," Dr. Cawston is alluded to as the first Streatfeild research scholar, but no lecture has yet been delivered under the Trust.

WARNEFORD HOSPITAL, LEAMINGTON.—Owing to the serious state of the finances the governors of this hospital have decided to adopt the principle of payment by patients. A committee has been appointed to decide what form the innovation should take, but it is understood that it will be on a purely voluntary basis, respect being paid to the means of the patient. Last year out of 1026 patients treated only 29 showed their thanks by monetary contributions.

INFANTILE DIARRHŒA AND VOMITING:

THEIR PROPHYLAXIS AND TREATMENT.

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AT this time, when our country is faced by the urgent necessity of repairing the ravages of war, any subject bearing upon the preservation of infant life becomes of the utmost importance. The object of this paper is to show how those distressing and dangerous complaints, diarrhœa and vomiting, may be controlled in the nursery by a regime of cleanliness as nearly allied to that of the operating theatre as the conditions will allow. Having access to the records of a home for children where these principles were put into practice, I have had good opportunity of studying the results of their adoption.

The diseases of infancy are among the most trying by which the practitioner is faced, and perhaps of all these diseases the two which form the subject of this thesis are the most difficult. In themselves they are by no means always mortal, but if prolonged, as so often happens, they are apt to lead to serious damage to the alimentary tract which may have a fatal result.

The Causation of Diarrhœa and Vomiting.

The great majority of the diseases of infancy and childhood are caused by bacterial infection. At the same time opinions expressed in text-books as to the infective nature of infantile diarrhœa are very divergent, while the infectivity of vomiting receives practically no attention. I intend therefore to deal first with diarrhœa and its treatment, and afterwards to produce evidence of the infective quality of vomiting and to describe the management of such cases.

The following authors may here be quoted to show the divergence of opinion mentioned above.

Ralph Vincent[1] states: "Epidemic diarrhœa is in no sense of the word an infectious disease and cannot be conveyed by contagion."

Frederick Taylor,[2] and earlier writers,[3] make no mention of infection, but attribute the disease to a variety of causes such as food and teething.

Savill[4] attributes it to various causes, but does not specify infection particularly.

Holt[5] gives five forms of diarrhœa, the fifth being headed, "Diarrhœa of Infective Origin," under which head he says: "The source of infection may be from without, bacteria being introduced with the food or water or accidentally; or it may be from within, where the non-pathogenic bacteria normally or frequently present in the intestines develop pathogenic properties."

Osler,[6] in a paragraph on the relation of bacteria to enteritis in children, says: "In infantile diarrhœa the number of bacteria that may be isolated from the stools is remarkable. Brooker has discriminated 40 varieties, the greatest number of which were found in cases of cholera infantum. The two constant forms noted above (*Bacterium lactis aerogenes* and *Bacterium coli commune*) do not disappear in the diarrhœal stools. No forms have been found to bear a constant or specific relation to the diarrhœal fæces, such as the two above mentioned do to the healthy milk fæces, the bacteria of the *proteus* group are most frequent, and possess pathogenic properties. All the varieties develop and produce important changes in the milk, which have been dealt with fully by Brooker in his exhaustive monograph (Johns Hopkins Hospital Reports, vol. vi.). This author concludes that in the diarrhœa of infants 'not one specific kind, but many different kinds of bacteria are concerned, and that their action is manifested more in the alteration of the food and intestinal contents and in the production

of injurious products than in a direct irritation upon the intestinal wall.'"

Eric Pritchard[7] says: "The commonest cause of diarrhœa is the development within the bowel of an abnormal bacterial flora."

Ballard[8] considers that the essential cause of diarrhœa "is intimately associated with the life process of some micro-organism not yet detected, captured, or isolated."

Investigation of Results of a Strict Regimen.

We have, then, a variety of opinions on the subject. The records of the home mentioned above (Upwick Vale Home, Eastbourne), opened in 1892 and continued until 1916 (25 years), where an average of 17 infants, from 1 month to 2 years old were lodged, fed, and clothed every year, show that in the first three years diarrhœa was seldom absent, and six deaths from that cause occurred. For the remaining 22 years no case of diarrhœa originated in the home, and there was not a single death from that cause.

How can this remarkable change in the incidence of the disease be accounted for? During the third year a very strict system of dealing with the children was established and rigidly adhered to, with the exception of certain occasions mentioned later. This system was as follows:—

All new cases were isolated on arrival until such time as it was certain that their motions were normal. A special room, provided with washing apparatus and slop sink, was set apart to which all babies had to be taken whenever the napkins required changing, and the room was regarded as much as an unclean place as the w.c. used by the adults. As the napkins were removed and placed immediately in a disinfectant, the nates were washed and bathed with a disinfectant, the nurse washed and disinfected her own hands and those of the child, and then put on the fresh napkins. A special nurse was detailed for this duty, and she was not allowed to take part in the preparation and distribution of food to the children. The food was kept in a larder and was not allowed in any room used by the children except at meal-times. The food up to eight months consisted of whole milk, water, and sugar, mixed in proper proportions and sterilised. After eight months or even earlier bread, oatmeal, potatoes, gravy, skimmed milk, and dripping and bread were given. Orange juice was given regularly, when the antiscorbutic and growth-encouraging properties of fresh fruit became known, though their use was empirical at that time. The mothers were provided with a basin of disinfectant for use at night when changing the napkins and before feeding the baby.

From the time of the establishment of this system, apart from new admissions, there was absolutely no diarrhœa in so far as the system was rigidly adhered to. On two occasions a temporary matron allowed some relaxation of the rules, when diarrhœa at once appeared. On this being discovered the rules were again strictly enforced, and within 72 hours the diarrhœa disappeared. No form of medicinal treatment beyond an initial dose of castor oil was found necessary.

In the cottages attached to the home, where infants from 2 to 5 years old were sent, the same routine was observed though the supervision was not so strict. Only one epidemic of diarrhœa started there, and on investigation it was again found that some relaxation of the rules had been allowed, and the children were attending to themselves after defæcation. The children were at once paraded, and it was found that all the clothes that came in contact with the nates were soiled with fæcal matter. The soiled clothes were taken away and new provided, and the system of washing and disinfection again established. The epidemic stopped absolutely in 48 hours, with no other physic than a dose of castor oil.

Here we have surgical cleanliness applied to the nursery for the prevention and treatment of diarrhœa, with the result that diarrhœa is stamped out without the aid of drugs.

From these facts we can but conclude that the diarrhœa of infants is not only infectious but autogenous, and that by the enforcement of surgical cleanliness and isolation of duties it can be avoided and checked.

Having come to this conclusion, after a brief summary of the system, it may be well to consider some of its chief points in detail. These points are five in number. They are:—

(1) The food was kept in a larder and, except at meal-times, was out of all contact with the children and their service.

(2) A separate room was used for the changing of the napkins and, where possible, a separate nurse for toilet.

(3) The nates were washed and bathed with a disinfectant.

(4) The nurses' and babies' hands were disinfected.

(5) The napkins were immediately placed in a disinfectant.

The significance of (1) is self-evident, and would be hardly worthy of note were it not that babies' food is so frequently exposed to the risk of contamination.

With regard to (2), though the adult is provided invariably with a w.c., the infant has frequently to use its combined larder, living room, and dining room for the purpose, and hence has an ever-present source of infection.

(3) and (4) I have not been able to find any author on this subject or on medicine in general who has pointed out the fact that, with no more than the usual precautions taken in the cleansing of the nates after defæcation, whether in the adult or the infant, and, however carefully carried out, the odour of fæces can be detected on the hand used. This is true in the case of the infant even if the greatest care is taken by the nurse, when removing and folding the napkins, not to bring her hand in the least contact with fæcal matter which may be visible on the napkin. It may also be observed that wherever the napkin is placed even for a few moments, with whatever care taken that no visibly contaminated part comes in contact with the surface on which it rests, this surface takes up the odour of fæces. The hands of the nurse as soon as she touches the napkin to remove it become a source of infection, as may any part of her dress which may come in contact with them. Infection from these sources may reach the food or mouth of the infant. To wash the hands is easy and therefore is insisted on, but to change the dress every time the napkin is changed is asking too much of the nurse; hence she must not come in contact with the infant's food. The baby's hands need washing not only after it has its napkins changed but at frequent intervals, as it is by them that septic matter most frequently reaches the mouth.

(5) The significance of placing the napkin in disinfectant is, to my mind, of great importance, apart from the fact above mentioned, for reasons based on the opinion of some competent authors on the ætiology of the disease. Ralph Vincent says: "The disease is most prevalent and most fatal in the third quarter of the year; the higher the temperature of the late summer the greater the prevalence, particularly if high temperature be associated with little rain." Ballard[8] states that "the essential cause of diarrhœa resides ordinarily in the superficial layers of the soil, where it is intimately associated with the life-history of some micro-organisms; ..... that the vital manifestation of such micro-organisms are dependent, among other things, perhaps principally, upon conditions of season." Holt[5] tells us that "Observations in a large New York dispensary extending over ten years showed an enormous increase in diarrhœa, rising from February (289 cases) to July (12,468 cases) and falling by the middle of October (1723 cases)."

These statements are in accordance with the commonly observed rule that infantile diarrhœa is more frequent in the hot months. During the hot dry months the fæcal matter is more rapidly dried and reduced to dust, which is easily disseminated by draught and wind. It is obvious that the disease may

become more widespread in the summer months. It may be noted in this connexion that Ballard[8] remarks that "such micro-organism is capable of getting abroad from its primary habitat, the earth, and having become air-borne, obtains opportunity for fastening on some non-living organic material." It is possible, in view of the above arguments, that the earth is not the original habitat from which the micro-organism becomes air-borne.

Conclusions as Regards Diarrhœa.

Considering again the relative importance of the five points given above, we see that the larder is but a means of preventing contamination of food by germ-laden dust and flies, and hence infecting the child; the separate room is but a matter of treating the child with the same decency and care as is meted out to the adult. If the washing of hands and nates were neglected, though the neglect would leave open a grave source of infection to the *individual* child, in the hot dry months the nates and hands are always damp to a greater or less extent with perspiration, and hence the fæcal matter does not so readily dry as to form a great danger to others. But the placing of napkins in disinfectant puts the largest and most easily dried source of infection of the community in general completely out of court, and it is for this reason that I consider this point of greater importance than the others as far as the safety of the many is concerned. It is interesting here to note that Holt[5] states that "the enormous increase in the number of cases occurring in the summer months does not have reference to any single form of diarrhœa, but to all forms"—a conclusion which, I think, adds emphasis to this point, since the dried fæcal material will disseminate many micro-organisms that inhabit the bowel.

Vomiting.

Having considered in detail the system as applied to diarrhœa, the similar system adopted at the home for the management of vomiting may now be considered. I do not refer to the simple regurgitation of almost unaltered food due to repletion, but the foul, acid vomiting which is so dangerous to the child and distressing to those who have the care of it. The system was as follows:—

Any child vomiting acid vomit was *immediately* removed from the nursery by the person noticing it and taken to an isolation room; its clothes were removed and the child bathed completely. When this had been done it was put into clean clothes. No milk was given for several hours, and the mouth was washed out at frequent intervals with a solution of borax in water. This sterilisation of the mouth is essential, as otherwise the infected mouth would infect the sterile milk.

A further possible source of infection were the spots of clean milk which get unavoidably splashed on the child's clothing during feeding. As a prophylactic measure, when the children's clothes were laundered they were, before being ironed, rinsed in borax and water; this precaution is particularly necessary in the case of bibs.

The use of this system provided a means whereby this dangerous complaint was held completely in check. Considering that the means used were those employed for the avoidance of bacterial infection and that they were effective, it may be urged that this is an indication of the infective nature of the disease.

In connexion with this point the possibility of the parent or nurse as a source of infection has to be considered. It seems horrible to suggest that any of these people may be a cause of so dangerous a complaint in their offspring or charge, but unclean hands or face, a foul mouth, or otorrhœa may well cause a disaster to the child. A case in point arose at the home. A child arrived in a pitiful condition due to gastric and intestinal disturbance, and in course of the routine was isolated and placed under the strict system of the home. As the child did not benefit in the usual manner, all possible causes for the persistence of the trouble were investigated. It was found that the mother was devoted to the child and was constantly kissing it. When examined she was found to have a mouth full of carious teeth. A promise was extracted that she would not kiss the child, and her teeth were attended to. The child's rapid recovery was the sequel.

If the result of the system as a whole is not proof of the infective nature of the diseases under consideration, this case gives proof of it as nearly as possible without bacteriological investigation.

Surgical Cleanliness Adapted to the Nursery.

Here, then, we have a system, for the principle governing that for diarrhœa and vomiting is the same, which controls two of the curses of infancy, and it is nothing more than the adaptation of surgical cleanliness to the everyday life of the nursery. It may be objected that the trouble involved renders the system inapplicable to the private patient. But of all people the private individual needs most training in the principles laid down in this paper. Of modern institutions which deal with babies, the great majority have trained nurses or matrons who insist on a standard of cleanliness in dealing with the babies being maintained. But in the home circle it is surprising what negligent and disgusting habits are indulged in. Who has not seen the mother or nurse who sucks the nipple of the bottle or comforter before giving it to the child? And there is the still more disgusting practice frequently used, though rarely in public, as the other is, of inserting the finger into the napkin to ascertain if the baby has passed water or defæcated, after which, whether the answer is in the affirmative or negative, the hand is by no means always washed before it handles the bottle or breast to feed the baby. These and similar practices, such as the above system is designed to combat, are used frequently in the lower classes, and are by no means entirely absent in the better class nurseries.

Experience shows that if it is explained to those in charge of the child that such practices may start disease, and that the adoption of the system, though apparently a troublesome one, may really be a saving of trouble and danger in the end, it is gladly adopted and soon becomes a matter of routine.

Its apparent effect on the death-rate from all causes is notable. I have worked out figures for comparison to the best of my ability from the figures given in the last Registrar-General's (1916) Report for Infant Mortality in the whole of England and Wales for the years 1892–1916—taking, that is, the years during which the home was open. I have been unable to get the exact numbers of infants in the home for the first three years separate from the remaining 22 years during which the system was in operation. The total number for the 25 years was 433—that is, an average of 17·35 per annum. For the whole of England and Wales in those years the deaths averaged 13·2 per cent. per annum from all causes, while in the home they were 7·8 per cent. The deaths in the home during the first three years amounted to 0·41 of the total for the whole 25 years, and were only included owing to the difficulty of separating the numbers in the records. Had they been omitted, the percentage for the 22 years during which the system was in operation would compare still more favourably with that for England and Wales. Also it must be borne in mind that the deaths from diarrhœa for the last 22 years were nil in the home, while the Registrar-General's figures work out at 2·25 per cent. for the whole of England and Wales.

If, then, it is possible, and I have shown it is possible, to apply the system to the everyday life of the nursery, two of the many great dangers to infant life will lose their terrors.

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HEART-BLOCK:

A RECORD OF TWENTY CASES.*

BY J. STRICKLAND GOODALL, M.B., M.R.C.P., M.S.A. LOND., F.R.C.S., F.R.S. EDIN.,

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FROM the year 1761, when Morgagni first described "Two Cases of Epilepsy with a Slow Pulse," which were in all probability examples of what was subsequently known as Adams-Stokes disease, interest has always centred round cases of heart-block, which are sufficiently uncommon to be interesting, while sufficiently common to be important. The writer therefore ventures to append an analysis of 20 cases of complete heart-block which have occurred within his practice during the past four years, in the hope that they may lead to a more complete appreciation of the condition.

The 20 cases were all carefully recorded. They included 15 males and 5 females, whose ages ranged between 4 and 74; the male cases ranging from 4 to 74 and the female cases from 27 to 65 years of age.

Family history.—Two of the cases were mother and son, and it is interesting to note in this connexion that both the grandmother and an uncle were said to have heart trouble with slow pulses. The Wassermann reaction was negative in both these cases. Another case was reputed to have had congenital heart trouble, and one brother and the grandmother were said to have had slow hearts. There were, however, none of the ordinary manifestations of congenital heart disease.

Personal history.—One man gave a history of rheumatic fever 40 years ago, one dated his trouble from an attack of "septic poisoning" followed by rheumatism, and one woman had a history of quinsy and tonsillitis. One man gave a history of syphilis 20 years before and had a definitely positive Wassermann reaction. Eleven of the cases gave negative Wassermanns. Six definitely attributed their condition to influenza. One case (a woman) gave a history of scarlet fever and one of diphtheria. Another case was obviously an acute myocarditis.

Symptoms.—The symptoms most commonly complained of were dyspnœa, "fits," pain, palpitation, vertigo. Fifteen of the cases complained of shortness of breath. Ten gave a history of definite fits (one having had them for over 19 years), while 10 complained of pain in the chest. "Palpitation" was complained of by 7 and appeared to be violent action of the heart due to extra-systoles. Four complained of vertigo.

Associated valve lesions.—Fourteen out of the 15 male cases had a systolic murmur at the apex conducted out to the axilla. One had, in addition, a presystolic murmur, and at times a diastolic murmur. In one case there was associated auricular fibrillation, and one case had apparently no valve lesion at all. As regards the five women, four had an apical systolic murmur conducted outwards, and one had a presystolic or diastolic murmur as well as a systolic.

It would appear, therefore, that 19 out of the 20 cases had mitral regurgitation, and 2 had mitral stenosis in addition.

The pulse.—The pulse-rate ranged from 10 to 64, and every case periodically exhibited an irregularity due to ventricular extra-systoles. The volume was full and the tension about normal.

Blood pressure.—This was usually well maintained, often slightly above the normal. A rise in blood pressure was frequently found to precede a fit. The lowest blood pressure recorded was 110 and the highest 180.

Work reaction.—Work reaction was good in most cases to low levels. The static test was also good.

Electrocardiographic examination.—Nineteen out of the 20 cases were electrocardiographed on several occasions, and all showed complete heart-block. Two of them, in addition, showed indications of a right branch lesion as well, seven showed a left-sided preponderance, and one showed a right-sided preponderance. Seven showed ventricular extra-systoles, and one case showed a very variable condition, at times complete heart-block, at others an obstruction to the right main branch, but with no obstruction to the main bundle. One case showed complete recovery. X ray examination showed typically large horizontal hearts.

After-histories.—Eight of these cases managed to carry on their ordinary light occupations, but had to take periodical rests. One man died suddenly at the house of a friend after a heavy meal. Post-mortem examination revealed the stomach very greatly distended and the heart displaced by pressure. One woman also died suddenly in a tram after a heavy supper; the stomach was found to be distended, the mitral valve stenosed and incompetent. This case had what was usually described as the third sound during life. A second woman died suddenly on the day following her mother's sudden death from heart disease. One woman became pregnant and was sterilised without mishap. One man had a prostatectomy successfully performed. This case subsequently died suddenly.

Summary and Conclusions.

The main points brought out by the above analysis appear to be: 1. The relative infrequency of a rheumatic or syphilitic history. 2. The almost invariable association of the condition with mitral regurgitation. 3. The tending to sudden death on gastric distension or exertion. 4. The occurrence of Stokes-Adams "fits" when the heart-block is complete. 5. The frequency of pain as a symptom. 6. The possibility of the condition being transmitted from mother to child. 7. The ability of some patients to work or even to stand severe operations.

* The basis of a clinical demonstration delivered at the National Heart Hospital on Feb. 11th, 1920.

CONGENITAL AND HEREDITARY DEFECTS IN RECRUITS:

OBSERVATIONS BASED ON THE MEDICAL EXAMINATION OF 25,500 MEN.

BY JOHN SINCLAIR MANSON, M.D. EDIN., D.P.H., MEDICAL OFFICER OF HEALTH, RUNCORN RURAL DISTRICT.

THE national necessity which has compelled the medical examination of large numbers of men of military age (18–41) has given an opportunity to observe in a short space of time the incidence of some diseases and defects having a relation to an hereditary or embryonic origin. Some of these are common to everyday experience; some are rare and exceptional even to the mature experience of men long in practice. When such rare cases appear in the small fraction of the population herein dealt with, it may not be too much to assume that, taking the population as a whole, these cases may form a class larger than has been supposed.

The analysis which has been here attempted is based on 27,794 examinations, of which 2294 were re-examinations, leaving a total of 25,500 men examined. The period covered is from Jan. 22nd, 1916, to June 15th, 1917. If a similar analysis were extended over all the men examined in the country, some idea would be given as to the range and limits of human variability as ascertained by external examination. No doubt the labour involved would be so great as to render it almost impracticable, but the results from the scientific point of view would justify it.

In making the examination of the foregoing cases none have been included where there has been a distinct history of trauma or acquired disease.

For example, all cases of epilepsy or mental defect where there has been a history of head injury have been excluded. The cases included comprise those idiopathic types which are generally acknowledged to have some more or less definite relation to heredity and those defects which are due to embryonic or intra-uterine causes. The cases have been grouped as follows:—

Central Nervous System.

1. Mental deficiency. This includes all grades from the merely dull and backward to the hopeless idiot with defects of speech and hearing, but it does not include cases of insanity or those with a history of insanity. Total number, 119. Proportion per 1000 examined, 4·7.

2. Epilepsy. All these cases have been confirmed either by medical certificates or by circumstantial evidence confirming the history. Only one case had an attack on the premises. Total number, 94. Proportion per 1000 examined, 3·6.

3. Doubtful epilepsy. History unconfirmed. Total number, 30. Proportion per 1000 examined, 1·2.

4. Deaf and dumb. Total number, 28. Proportion per 1000 examined, 1·1.

Eyeball.—Malformations of shape not apparent to observation are revealed by the cases of high myopia and high hypermetropia which occurred with some frequency. These are nearly always congenital or developmental. It was impossible to distinguish these from the lesser degrees of the same defects which were probably acquired and were very numerous. Conical cornea, total number, 3; congenital cataract, total number, 16. Double congenital coloboma in lower half of iris with eccentric pupil, 1. Captain R. Richards, R.A.M.C., reports "that the structures behind the iris are also involved and that both retinæ present coloboma of large extent. The case is of ophthalmological interest." Congenital coloboma in lower half of iris of right eye with eccentric pupil but with loss of left eye, 1. Double microphthalmus, 1. Congenital ptosis, 3. Colour blindness with family history of the affection, 1.

Pinna.—Small right malformed pinna with imperforate meatus, 1. Small left malformed pinna, meatus normal, 1. Right and left pinnæ pointed in the region of Darwin's tubercle, which was absent, 1.

Skin.—Psoriasis, total number, 60; per 1000, 2·4; ichthyosis, total number, 12; per 1000, 0·5; leucoderma marked, 1.

Goitre.—All cases of exophthalmic goitre excluded, owing to the frequency with which goitre appeared in the small number examined from the S.E. district of Cheshire. This group is divided into two: from Lancashire, 34; per 1000, 1·5; from Cheshire, 16; per 1000, 7·0.

Muscular system.—Absence of sternal portion of pectoralis major, 2 on right side, 2 on left—total number, 4. Congenital wry-neck, 3. Congenital dystrophy of muscles, 1.

Urogenital system.—Undescended testicle, 42; per 1000, 1·7. Extroversion of bladder, 2. Sexual immaturity: Miniature penis, scrotum, and testes with predominance of secondary female characters of feature, voice, and smooth hairless skin, 3. Pseudo-hermaphroditism: External genital organs presenting both male and female characteristics. The meatus opened behind a well-developed penis or clitoris with well-marked labia minoræ and majoræ. Small bodies, probably testes, could be felt in the inguinal canal and the individuals showed predominance of secondary male characters of feature, voice, and coarse hairy skin, 2. Mistaken sex—with complete female characters—genitalia, breasts, voice, and skin, dressed and working as a male from early life, 1.

Mouth and lips.—Cleft palate, 11. Hare-lip, 1.

Lower limbs.—Congenital dislocation of hip, 13; talipes valgus, 4; talipes equino-varus, 19; pes cavus, 17. In noting the last two groups the distinction between the congenital and the acquired varieties has not always been made; only 5 of the 19 cases of talipes equino-varus were noted as congenital. Webbed toes, 3; there were probably more cases of webbed toes which were noticed but not noted. Congenital stump of right leg below knee 4 inches long with three small buds representing toes, 1.

Upper limbs.—Congenital deformity of left scapula: The scapula was higher up and smaller than its fellow on the right. There was also some limitation of shoulder movements, 1. Congenital deformities of hand and forearm, 20. Only 11 of these can be specifically described, the other 9 are noted as congenital deformity of hand, but it is understood that this refers to either absence of one or more digits or to supernumerary digits with abnormal articulations and webbing. The following are the 11 cases: 1. Webbed third and fourth fingers on both hands. 2. Left hand with only thumb and little finger, absence of second, third, and fourth fingers—a condition of claw hand. 3. Absence of right thumb. 4. Supernumerary right thumb. 5. Macrodactyly—abnormally large middle finger, about twice the size of its adjoining fellows. 6. Both hands abnormally large, with family history of the condition. 7. Brachydactyly, with family history of the condition. 8. Congenital stump of left forearm, with two bony digits attached. 9. Congenital stump of left forearm 4 in. long, with five small buds representing digits. 10. Congenital stump of left forearm at the carpo-metacarpal articulation, with minature thumb and a row of four minute portions of nails representing digits. 11. Congenital deformity of right hand and foot. Right hand: Thumb normal in appearance; at base of right forefinger there is a marked constriction. A similar constriction is present round base of proximal phalanx of middle finger, which is much shortened. The ring and little fingers are abortive and fused together. Right foot: Much shortened owing to short metatarsals. The toes are represented by five imperfect diminutive digits.

Miscellaneous.—1. Hæmophilia, 3, with family history of the condition. 2. Albinism with nystagmus, 1. Two brothers and one sister affected, five brothers and one sister unaffected. 3. Blue sclerotics and brittle bones, 1. This person had markedly blue sclerotics and gave history of multiple fractures—left leg three times, right leg once, left arm once, and dislocation of both elbows. No family history in this case. 4. Left cervical rib, 1. 5. Spina bifida, lumbar region, 1. 6. Transposition of viscera, 1. 7. In coccygeal region, at base of coccyx a number of individuals showed a small rounded or oval swelling at upper part of the natal cleft. This swelling felt firm and fleshy, and when the natal cleft was wide, as it was in many of these cases, the appearance was very like that of an abortive tail.

Comments.

It need hardly be said that it would be unwise to generalise from the figures here given to the whole population. The number examined, 25,500, is too small a proportion, and, in addition, selections for the army from the age-group 18–41 had already been made during a period of 18 months previous to the commencement of these examinations. This selection would tend to concentrate the defectives, but even allowing for this the proportion of mentally defectives, epileptics excluding the doubtful cases, and deaf-mutes seems high. Aldren Turner[1] estimates the proportion of epileptics in this country to be about 1 per 1000. Kerr Love[2] estimates proportion of deaf-mutes for England to be 1 in 2043. For mentally defectives there are no statistics available for comparison. The discrepancy between former estimates and the present figures may be explained on the ground that the present system of examinations is bringing to light cases that would otherwise have remained obscure, together with concentration of defectives due to the continuance of the war.

A comparison between the congenital abnormalities of the upper and lower limbs seems worth

[1] Turner: Encyclopædia Medica, vol. iii., p. 314.
[2] Love: Encyclopædia Medica, vol. ii., pp. 421.

noting from this study. The digits of the hand present a variety and complexity of abnormal structure not manifested by the digits of the foot, although both present normally a similar homologous structure. The congenital deformities in the lower limb are chiefly confined to the varieties of talipes and the defective formation of a socket for the head of the femur by the ilium, pubis, and ischium—congenital dislocation of hip. In the upper limb the scapula is homologous to the ilium, but in only one case did this present any congenital abnormality. It would seem that variations in the limbs chiefly take place along their line of function—the lower limb as a locomotory instrument, and the upper limb as a grasping instrument.

I am greatly indebted to my colleagues, Drs. E. E. Bowden, H. Langdale, W. J. Peacocke, and C. Robinson, for help, and to the president of the board, Major G. R. Fitzgerald, R.A.M.C., and also to the late Mr. Warren, the chief clerk, for assisting in a tedious enumeration.

Warrington.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THREE CASES OF TRAUMATIC RUPTURE OF THE SPLEEN.

BY C. M. PLUMPTRE, M.R.C.S., L.R.C.P. LOND.,
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TRAUMATIC rupture of the spleen, unassociated with injury to any other abdominal viscus, is of sufficient interest to justify a brief account of three cases of this nature that occurred within a period of three months at this hospital. Two of the cases recovered satisfactorily after splenectomy; the third died two hours after operation. The patients, though Indians, were not the subjects of any marked chronic splenic enlargement, the organs on removal being about normal size and weighing respectively (1) 5 oz., (2) 7½ oz., (3) 8 oz.

The following are brief notes of the cases:—

CASE 1.—Cleaner, N.B. Railways. Admitted on 21/6/19 at 11 P.M. His history was that he had received a blow with the fist at about 7.30 P.M. the preceding evening. He had been sick and in pain during the day. On admission patient was very collapsed, pulse 130. His lips, tongue, and conjunctivæ were very pale. On palpation no absolute rigidity, but general resistance and pain most marked in left hypochondrium were present. There was abdominal dullness on percussion. Operation under chloroform and ether at 11.30 P.M. The abdomen was opened through the mid-line; the peritoneal cavity was full of blood and a large tear could be felt on the diaphragmatic surface of the spleen. The pedicle was controlled, the organ was freed and brought out of the wound and removed. As much blood as possible was mopped out of the abdomen, and 2 pints of saline with an ounce of ether poured into the peritoneal cavity. The abdominal incision was closed in layers. The patient was very ill for several days and had a sharp attack of bronchitis. Subsequently convalescence was most satisfactory, and when seen some five months later the patient was very fit and had increased considerably in weight.

CASE 2.—Driver, N.M. Machine Gun Company. Admitted 25/8/19 at 10.30 A.M. He said he had been kicked on the left side of his back the same morning about 6.40 by a mule. He complained of abdominal pain and had been sick once. He was not markedly anæmic, pulse 110. The left hypochondrium was rigid; there was dullness, which did not alter on turning the patient over, in the left flank, and general tenderness on abdominal palpation. Operation under chloroform and ether. The abdomen was opened through the left rectus and found to be full of blood. Two tears could be felt extending outwards from the hilum into the substance of the spleen, which was freed, brought out of the wound, and removed. The blood was mopped out of the abdomen and the wound closed. For four or five days there was an evening rise of temperature to 100° F.; convalescence was then uninterrupted, and the patient was evacuated apparently quite fit a month later.

CASE 3.—Driver P., Army Troops Transport. Admitted 10/9/19 at 10 A.M. He said that about 7 A.M. that morning he fell off a loaded A.T. cart which passed over his chest and stomach. Patient was very collapsed, sweating and markedly pallid, with a feeble pulse of 120. He complained of thirst, was restless and anxious. The abdomen was distended, painful on palpation, and did not move on respiration; both flanks were dull. Operation 11 A.M. under spinal anæsthesia. The abdominal cavity was opened through the mid-line, and was full of blood. A tear could be felt extending almost a third of the way through the organ on the diaphragmatic surface of the spleen, which was brought out of the wound and removed. The abdominal cavity was mopped free of blood, hot saline poured in, and the wound closed. Patient gradually got worse, and despite resuscitative measures became unconscious and died about two hours after the operation.

Observations on the Cases.

Case 1 was rather unusual, in that the injury had been sustained 24 hours before admission to hospital; it is possible that this was an instance of subcapsular bleeding with late rupture and intraperitoneal hæmorrhage. At the operation, a tear in the spleen, 2 inches long by 1 inch in depth was found.

All the patients exhibited the signs of severe intra-abdominal hæmorrhage, and operation was undertaken immediately in each case, saline being given during the operation. In two patients a mid-line incision was made; in the third the incision was made through the left rectus. It was found the spleen could be brought out sufficiently through either incision to ligature the pedicle without undue tension. No attempt was made to suture the spleen, the patient's condition and the damage to the organ, which in each case was very considerable, being taken to contra-indicate this line of treatment.

I wish to thank Lieutenant-Colonel M. Mackelvie, I.M.S., Officer Commanding the 61st Indian Stationary Hospital, for permission to report these cases, and Major P. Tarapore, I.M.S., and Lieutenant J. A. Ross, R.A.M.C., who very kindly acted as assistant and anæsthetist at the operations.

A CASE OF CONGENITAL MALFORMATION OF THE LARGE INTESTINE IN A NEW-BORN INFANT.

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THE rarity of these cases justifies the publication of this one.

A full-term male child, born five days previously, was admitted to the wards of the Metropolitan Hospital on Feb. 13th with a slightly distended abdomen and a history of absolute constipation since birth. Delivered as a breech presentation, the child was cyanosed at birth. He appeared to be healthy and took feeds regularly by breast and bottle. Urine had been passed

as well as flatus, but no melæna or fæces had been evacuated. No vomiting, restlessness, or evidence of pain noted.

On examination the child, a somewhat poorly developed infant weighing just over 5 lb., presented no evidence of discomfort or distress. Temperature 96·4° F., pulse 142, respirations 36. The abdomen was moderately and uniformly distended, and its appearance suggested distension of the small intestine. No peristaltic movements were visible or palpable, and no tumour was felt through the abdominal wall. Rectal examination at first gave the impression of atresia of lower part of rectum, but on more careful palpation it was obvious that the lumen of the bowel was patent, though very markedly narrowed. There were no evidences of developmental abnormality present elsewhere. Ol. ric. and a glycerine enema were administered without result, except for a small amount of slime. Feeds of milk and barley-water were taken. After observation for several hours no vomiting and no action of the bowels occurred and the abdomen became more distended, and laparotomy was performed.

Operation.—After a preliminary bandaging of limbs a small paramedian incision was made below the umbilicus and the peritoneal cavity was opened. Free gas and clear fluid exuded under pressure. Coils of motionless, congested, distended, and hypertrophied small intestine were brought into view. Small petechiæ were present over the surface of the gut and also areas of lividity. In addition small flakes of lymph and fibrinous serous exudate showed evidence of the onset of diffuse peritonitis. It was only with the utmost difficulty (and by enlarging the original incision) that a small contracted cord, no larger than a thick piece of string, representing the transverse colon, was brought into view. The distended ileum was ultimately traced to the ileo-cæcal junction, and a very much attenuated cæcum identified. Diligent search revealed no trace of any mechanical block by bands, volvulus, intussusception, &c. As the patient was showing evidences of cardiac embarrassment it became necessary to bring up into the parietal wound a loop of ileum close to the ileo-cæcal valve and open it on the surface. A small Paul's tube was inserted with a purse-string suture, and the abdominal wall closed in one layer. The condition of the child improved somewhat overnight. Hyd. cum cret. in half-grain doses was administered by mouth, but no action of the bowels resulted and no flatus was passed. Subcutaneous saline was transfused. The child died the following day within 24 hours of admission.

Post-mortem.—At the autopsy the stomach, duodenum, and coils of small intestine were all very markedly distended and the muscular coats hypertrophied. Ecchymoses and fibrinous deposits were present. Immediately adjacent to the ileo-cæcal valve, the ileum was collapsed, and showed a distinct perforation of the wall in the shape of a small ragged tear. The ileo-cæcal valve was patent. The large intestine was represented by a pale contracted band which would only admit a moderate-sized probe. From the diminutive cæcum downwards the colon was markedly attenuated and poorly developed in a gradual decline, especially marked below the hepatic flexure. A minute appendix was present. The small intestine contained liquid fæcal matter, and the contents of the ascending colon and cæcum consisted solely of bile-stained meconium. A thin plug of inspissated mucus was found blocking the lumen of the gut in the region of the splenic flexure. The large intestine was present in its entirety, and no atresia or occlusion (apart from the plug of mucus) was observed in any part of the colon. No other mechanical cause for obstruction was found. The condition of the large bowel was obviously due to malformation—microcolon—a developmental error in early fœtal life, and did not represent a state of collapse below an obstruction giving rise to mechanical ileus. No other developmental abnormalities were found post mortem.

I have to thank Dr. Edmund Cautley, under whose care the child was admitted, and Mr. Robert A. Ramsay, who operated, for permission to publish this case

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

EXHIBITION OF CLINICAL CASES.

A MEETING of this section of the Royal Society of Medicine was held on April 16th, Sir ANTHONY BOWLBY, the President, being in the chair, when clinical cases were exhibited.

Mr. ARTHUR EVANS showed a case of

Actinomycosis of the Thoracic Wall.

The patient first noticed pain and swelling in his left side and back about ten weeks before admission to hospital. He thought the present swelling was due to having been hit by a pole in the ribs. His previous health had been good. His occupation was an indoor one. There was on the left side a swelling of the lower thoracic margin, involving apparently the seventh, eighth, ninth, and tenth ribs and extending from the middle line to the mid-axillary line. The left thoracic margin, grasped between the fingers, felt three times as thick as that on the right. There was tenderness on pressure over the tumour. X ray examination showed the presence of a shadow in its region. An incision was made through almost its entire thickness, but no inflammatory focus was found. As the case was regarded as one of sarcoma the tumour was excised widely, which necessitated the removal of portions of the eighth, ninth, and tenth ribs, and the muscles of the abdominal wall adjoining. When this mass was removed the exploratory incision which had been made into the tumour substance was deepened, immediately subjacent was found a narrow streak of pus containing yellow granules, suggestive of actinomycosis. The base of the large wound was composed of peritoneum and pleura, both of which were unopened. As a substitute for the abdominal muscles two large silver filigrees were sutured into position between the peritoneum and the skin, covering an area extending from the outer border of the left rectus to the mid-axillary line, and from the rib margin to the level of the iliac crest. About three months after the operation a nodule appeared posterior to the site of the original tumour. This broke down and a sinus formed discharging actinomyces. The patient was put on large doses of potassium iodide, and the swelling gradually disappeared.

In answer to a question by Mr. A. W. SHEEN, Mr. EVANS said that there was no evidence to show how the infection gained entrance. At the operation he was able to shell off the peritoneum and pleura with ease, and there was no sign whatever that any tract had communicated with the tumour.

Mr. EVANS also showed a case of

Acute Osteo-myelitis of a Lumbar Vertebra.

The patient was a boy, aged 16½ years, who had left off work in October, 1919, feeling unwell. He had previously had three boils over the sacral region. Two days later he complained of headache and pain in the lower part of his back and in his legs; he began to have great difficulty in micturition and suffered from "pain in his stomach." There was no history of vomiting or of a sore-throat. When first seen in November he complained of great pain in his lumbar and sacral regions and in both legs. For ten days previously he had been running a temperature which had daily risen to 100°, 101°, or 102°. The cranial nerves were normal. Abdominal reflexes were present, the knee-jerks were absent, Achilles jerk was present, and the plantar reflexes gave an extensor response. He could flex and extend the right knee and ankle, but the movements were all feeble; he could flex but not extend the left knee and ankle. Both limbs were wasted, and especially the left quadriceps extensor cruris muscle. There was no sensory loss. There was evident tenderness over the upper part of the sacrum, more on the right than on the left side, and great tenderness on pressure over both erectores spinæ. A tentative diagnosis of acute anterior poliomyelitis involving the third and fourth lumbar segments was made. As the condition showed no improvement an operation was performed. A median incision was made over the lumbar spines and the muscles retracted. The third lumbar spine was found to be necrosed and loose, and from this site an abscess extended into the right and left erectores spinæ. On exposing the vertebral canal it was found to contain thick, yellow, odourless pus.

The canal was opened down to the sacrum. Pressure over the latter caused pus to well up out of the superior aperture of the sacral canal, so this also was opened up along its entire length. The whole of the exposed part of the spinal canal was filled with necrotic tissue covering over the dura and the cauda equina. Bismuth iodoform paste was gently rubbed over it and the wound closed, save where it gave exit to a gauze drain. For a few days after the operation there was incontinence of fæces. Recovery was rapid, and in two months the patient could walk perfectly. The cerebro-spinal fluid obtained by lumbar puncture showed an excess of polymorphonuclear leucocytes; no organisms were seen.

Mr. EVANS also showed a case of

Cystic Adenoma of the Bile-ducts.

It was that of a woman on whom he had operated in December, 1919. The patient was admitted to hospital in November. She was emaciated, looked ill, was slightly jaundiced, and complained of constant pain in the upper part of the abdomen. In the epigastrium and continuous with the edge of the liver was a tense cystic tumour reaching down almost to the umbilicus. On opening the abdomen free fluid of a myxomatous nature was found in the peritoneal cavity. The tumour proved to be a large cyst attached to the under surface of the liver. On opening this yellowish viscid fluid escaped. The examining finger felt masses of what were thought to be daughter cysts adherent to the inner wall. They were detached with difficulty. The greater portion of the cyst wall was removed, and a large drainage-tube inserted. Microscopical examination proved the tumour to be a multilocular cystic adenoma of the bile-ducts.

Mr. PHILIP TURNER showed a case of

Fracture of the Left Humerus: Non-union (Pseudarthrosis) after 34 Years.

The patient, a man, aged 53 years, attended hospital about three weeks ago for partial rupture of the right biceps. In the course of examination it was found that he had an ununited fracture of the left humerus, the result of an injury 34 years before, a report of which stated that he had been admitted to hospital in 1886 for injuries received as the result of a "stack of iron" falling on him. There was a compound fracture of the right tibia and fibula, a fracture of the shaft of the left humerus about the junction of the middle and lower thirds, and a wound of the right hand with dorsal dislocation of all the first phalanges of the fingers. The fracture of the humerus was treated at first by an anterior angular splint with three small splints, later by a plaster-of-Paris splint, and then, as this was not satisfactory, by an internal angular splint and small splints. Before discharge it was noted in the old hospital reports: "Position better, much firmer union." Though at present there was a very marked deformity, the appearance superficially resembling a Charcot's disease of the elbow-joint, the functional result was remarkably good. The elbow-joint was not absolutely ankylosed, but flexion and extension of the forearm on the arm took place in the false joint, where, in addition to the normal movements, there were also lateral mobility and a certain amount of hyper-extension. The muscles of the forearm and arm were well developed and there was a powerful grip. All the normal movements of the arm and forearm could be carried out with the exception that, owing to lack of rigidity in the false joint, the arm could not be raised above the level of the head. The patient said that the arm was "strong, but not quite so strong as the other." He had continued since the accident in his original employment as a labourer at an ironworks; the work was very heavy and included lifting heavy girders. There was no pain in the joint and the patient complained of no disability. The case was shown on account of the very long interval since the original injury, and to demonstrate that a strong, useful, and painless arm might result with an ununited fracture of the humerus.

Tuberculous Caries of Mid-dorsal Spine.

Mr. A. W. SHEEN showed a girl aged 22, who had been admitted to hospital with rather acute tuberculous caries of the mid-dorsal spine. There were pain and tenderness and the patient had become very thin. A tibial bone-graft was inserted in 1914. She remained in hospital for three months after the operation and rested at home for six months, had a holiday, and then resumed work. She could get about satisfactorily and do her work. According to a recent X ray report there was considerable bowing, but no caries, while the graft showed like a long curved rod and was rounded off.

The PRESIDENT remarked on the slight degree of deformity which was present, and which was not of the angular type.

HUNTERIAN SOCIETY.

TREATMENT OF ANTE-NATAL AND POST-NATAL SYPHILIS.

A MEETING of this society was held on April 14th at the Venereal Diseases Centre for Pregnant Women, 18, Thavies Inn, Holborn Circus, E.C., at the invitation of Mr. John Adams, Dr. W. LANGDON BROWN, the President, in the chair. The society had already marked its appreciation of the pioneer work done by Mr. Adams at this centre by awarding him its medal, which is awarded annually with the object of encouraging individual effort among general practitioners in advancing the science and art of medicine.

Mr. ADAMS said that the centre was established in 1917 for the treatment of syphilitic pregnant women and their babies, and the results might be judged by reference to the following table:—

Year.	Syphilitic mothers.	Babies with positive W.R.	Babies with negative W.R.	Stillborn.
1917–18	28	17*	6	5
1918–19	30	8†	21	1

* 3 died—1 aged 6 hours, 1 aged 14 days, 1 aged 36 days.
† 1 died, aged 2 months.

The cases undergoing treatment at the centre were first shown—nine mothers with babies of various ages up to 2½ years being demonstrated, and their healthy appearance gave some indication of the success of the treatment adopted. Mr. Adams said that the results obtained since the centre was first opened had been sufficiently striking to warrant certain definite conclusions[1] being drawn from them. A syphilitic pregnant woman could be treated safely and effectively with arsenical preparations up to the day of her confinement. Such a woman, if actively treated, might give birth to a child with a negative Wassermann, although her own blood might still be positive. The child throve if the mother had been treated. If, however, the child was syphilitic when born it could be treated immediately after birth with safety and considerable benefit. These beneficial results were obtained by intramuscular injections of galyl dissolved in glucose solution, but were considerably enhanced by simultaneous intramuscular injections of mercury, combined with oral administration of hyd. cum cret. Further, the child was found to respond much more readily than the mother to treatment, if one judged by the blood test. The child throve, put on weight, and became quite normal. The fact that no syphilitic manifestations had been observed in any of the babies born during the past year and actively treated at this centre illustrated very forcibly the effects of treatment.

Demonstration of Methods of Treatment.

The demonstration of the methods of treatment employed at the centre took place in the theatre. Mr. Adams showed syphilitic infants undergoing treatment by intramuscular injections of galyl in glucose solution and mercury (grey oil). The initial dose of galyl used is 1·5 cgm., and is given on the day of birth followed by a similar dose after a week. From then onwards the injections are given fortnightly and the results of treatment controlled by the application of the Wassermann test at intervals. In Mr. Adams's view it is important to give the galyl in glucose solutions, and the doses gradually increase from the initial dose of 1·5 cgm. to 5 cgm. The combined mercurial treatment commences after the first week and is given in the form of intramuscular injections of grey oil into the buttock. For this purpose a special syringe has been devised, provided with 15 divisions, each division corresponding to one-fortieth of a cubic centimetre. When 40 per cent. grey oil is used, each division then contains 1 cgm. of mercury. The grey oil used for the babies is 20 per

[1] See also THE LANCET, 1918, ii., 770.

cent., and the amount given is raised gradually from ¼ gr. of mercury to ½ gr. It is conveniently injected into one buttock, and the galyl injected into the other, both injections being administered fortnightly. The maternal injections are given weekly. At the demonstration, the blood for the Wassermann test was taken with ease and rapidity from the heel of the infants. The foot had been placed in hot water for a few minutes, and then dried, and held in the left hand, while three stabs with a needle quite close together were made into the heel. Blood flowed freely, and the flow was assisted by gentle squeezing. The actual treatment of the syphilitic mother was also shown.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of this society on April 1st a discussion was held on

Anæsthetics.

Mr. HERBERT HALLAM, in opening the discussion, after comparing the merits of ether and chloroform, said that the only two safeguards against overdose were a knowledge of the physiological action of chloroform and the maintenance of a free airway. He then enunciated his theory of the cause of chloroform overdose as follows. Air containing chloroform enters the lung alveoli and the vapour is absorbed by the blood, such absorption depending on (1) the percentage of chloroform in the inhaled air; (2) the air pressure in the alveoli. Thus a to-and-fro current of air containing chloroform goes on in and out of the lung alveoli, and as more vapour is absorbed the characteristic signs of anæsthesia develop. So far only the tidal air in the alveoli is involved. If this exchange occurs with freedom all is well, but if any interference with respiration occurs through obstruction the situation is altered to one of extreme danger. The remedy for obstruction is expiratory effort, and the combination of effort and obstruction raises the alveolar pressure, with involvement of the residual air and rapid absorption of chloroform leading to an overdose. The patient is poisoned, not from the chloroform on the mask, but from that in his alveoli. Illustrations in support of this theory were: (1) In the operation for tonsils and adenoids a patient lightly under may through obstruction from the tongue or the manipulations of the surgeon become suddenly poisoned; (2) the absence of poisoning where intratracheal chloroform by means of a catheter is employed with its free airway; (3) the rapid recovery from poisoning when, by removing obstruction and performing artificial respiration, intra-alveolar pressure is removed. Lastly, he referred to the question of idiosyncrasy to chloroform and the value of suggestion before operation.

Mr. W. T. DAKIN MART then demonstrated Boyle's Gas and Oxygen Apparatus. He pointed out that at the outset it was essential to see that all adjustments were in order and that sufficient gas and oxygen was at hand, and that the reserve cylinders were ready for immediate switching on; to turn the taps on gradually and see that the lamps attached to the neck of the cylinder were burning in order to prevent freezing; to make sure that the face-piece was firmly attached to the patient's face in order to give the anæsthetist absolute control over the mixture. So far as circumstances allowed the patient should be comfortably placed with the head slightly raised. The anæsthetic should be given in the theatre and absolute quiet was essential. No holding of the patient was desirable or necessary. He advocated preliminary medication with morphia ¼ gr. and atropine 1/150 gr. 20 minutes before the start of the operation. In abdominal operations the abdominal wall should be anæsthetised, after the patient is under, by means of ½ per cent. novocaine and ¼ per cent. potassium sulphate given independently and injected layer by layer. This prevented pain after coming round, and so enabled the patient to breathe more deeply and clear the lungs more quickly. It was desirable to start the induction with a pressure equal to one hole of oxygen and three of nitrous oxide. The patient first breathes air until the bag is three-quarters full of the above mixture, when the valves are turned on and he breathes from the bag and into the air. Then re-breathing in and out of the bag is commenced. The colour of the ears should be watched, and if they become dusky more oxygen should be given. The signs of complete anæsthesia were regular quiet breathing, sometimes difficult to obtain when there was much re-breathing, pupils small and active, eyes moving, and a normal pink colour. The signs of deep anæsthesia were snoring, which was difficult to avoid with the re-breathing mechanism, dusky tinge, jactitation, rolling up of the eyeballs, and dilatation of the pupils. These signs indicated that more oxygen should be given. Suitable cases for this method were amputations, chest cases, cases suffering from severe shock, and pneumonia and bronchitis requiring operation. Nose and throat cases were difficult to anæsthetise by this method. Advantages over other methods were: no fall of blood pressure, very little vomiting, rapid recovery from the anæsthetic, and often an improved general condition of the patient after the operation.

Mr. R. V. FAVELL demonstrated Marshall's apparatus for gas and oxygen, and many other members took part in the discussion, including Dr. T. Robertson, Dr. R. J. Hillier, Dr. W. Sneddon, Dr. N. Milner, Dr. J. B. H. Holroyd, Dr. T. B. Stedman, and the President.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held at the University of Bristol on April 14th.—Dr. D. A. ALEXANDER showed a case of Myxœdema; also a case of Tetany in a boy of 18, with defective physical development and a rather full thyroid gland.—Dr. J. M. FORTESCUE-BRICKDALE showed a boy of 19 with very defective development, probably due to pancreatic insufficiency.—Dr. J. R. CHARLES showed a case of Myelogenous Leukæmia, with symptoms indicative of a lesion of the labyrinth on both sides, coming on simultaneously and acutely.—Mr. HUBERT CHITTY showed a child with an Inclusion Dermoid of the Scalp; and another patient with a Lymphangioma of the Cheek, under treatment by electrolysis through the mucous membrane.—Dr. RICHARD CLARKE demonstrated a specimen of Pituitary Tumour; the chief symptoms had been acromegaly, optic neuritis, and diminished glucose tolerance.—Mr. J. P. I. HARTY and Dr. F. J. A. MAYES showed a case of Epithelioma of Tonsil, Palate, &c., undergoing treatment by diathermy and injections of copper alanin, with promising results.—Mr. CLIFFORD MOORE showed a boy with Schlatter's Disease (bilateral).—Dr. J. A. NIXON showed a child with Morbus Cordis and Congenital Syphilis; a man with Steatorrhœa following Gastro-enterostomy (possibly due to implication of the pancreas in the base of a gastric ulcer); and a youth convalescent from an illness resembling to some extent Toxic Polyneuritis and also Encephalitis Lethargica.—Dr. GEORGE PARKER brought a number of children with Infantile Diplegia, to whom thyroid extract was being given with benefit; also cases illustrating Paralysis of the Serratus Magnus and of the Trapezius; and a man with a lesion of the external cutaneous and genito-crural nerves associated with an operation for inguinal hernia.—Mr. A. RENDLE SHORT showed two patients doing well after Albee's operation for tuberculosis of the spine; and a specimen of Malignant Papilloma of the Renal Pelvis removed by Operation.—Dr. J. O. SYMES showed two patients exhibiting an Indurative Erythema of the Skin over the calves of the legs.—Dr. P. WATSON-WILLIAMS showed a patient from whom he had removed a large Polypus of the Sphenoidal Sinus, together with the tumour.—Dr. CECIL WILLIAMS showed a case of Œdema of both Eyelids in a boy whose mother had been similarly affected after eating oranges; there was reason to regard the boy's lesion as the outcome of a similar "toxic idiopathy."—Mr. C. FERRIER WALTERS showed two patients with Exophthalmic Goitre who had been relieved by the Dunhill operation.—Dr. W. KENNETH WILLS showed patients cured, by a single dose of X rays, of (1) Rodent Ulcer of three years' standing, (2) Lupus Erythematosus Discoides; also a man with a Syphilitic Tumour of the Maxilla undergoing successful treatment with novarsenobenzol; and a severe and intractable case of Dermatitis Herpetiformis.—Mr. DUNCAN WOOD showed four ex-Service patients in whom persistent traumatic bony defects had been closed by grafts of living tissue-muscle in three cases and bone in one.—Mr. A. J. M. WRIGHT showed a man with Cicatricial Stenosis of the Larynx due to a gunshot wound, in whom laryngostomy had been performed, and would be followed later by a plastic operation for closure of a cartilaginous graft.

A CONJOINT meeting of the Obstetrical and Gynæcological Section of the Royal Society of Medicine with the North of England and Midland Obstetrical and Gynæcological Societies will be held in London at the rooms of the Royal Society of Medicine, 1, Wimpole-street, W., on Thursday, May 6th. The discussion at the morning session will be on the Treatment of Ante-partum Hæmorrhage, opened by Dr. Hastings Tweedy at 10.30 A.M. At the afternoon session a discussion on Rupture of the Cæsarean Section Scar in Subsequent Pregnancy or Labour will be opened by Dr. Eardley Holland, and followed by statistics from various hospitals throughout the country. A dinner will be held at 7.30 P.M., at the Great Central Hotel, Mr. J. D. Malcolm, President of the Section, in the chair.

Reviews and Notices of Books.

A TEXT-BOOK OF GYNÆCOLOGICAL SURGERY.

Second edition. By COMYNS BERKELEY, M.A., M.C., M.D. Cantab., F.R.C.P., Gynæcological and Obstetric Surgeon to the Middlesex Hospital, &c.; and VICTOR BONNEY, M.S., M.D., B.Sc. Lond., F.R.C.S., M.R.C.P. Lond., Assistant Gynæcological and Obstetric Surgeon to the Middlesex Hospital, &c. London: Cassell and Co. 1920. With 489 figures in the text and 16 colour plates. Pp. 829. 42*s*.

THE first edition of this work appeared in 1911, and in consequence of the time that has elapsed numerous alterations have been necessary. A considerable amount of space is devoted to the authors' views on the ætiology of prolapse of the uterus and vagina. Not many gynæcologists will be found to agree with their suggestion that the broad ligaments play an important part in the suspension of the uterus in its normal anteverted position. They describe an upper, a middle, and a lower segment of the suspensory apparatus, and from this deduce that there are seven clinical varieties of displacement of the genital canal, the operative treatment of each of which they discuss in detail. We are glad to see that they strongly deprecate the operation of hysterectomy for any of these conditions; they point out the true use of shortening of the round ligaments, and do not recommend this operation for procidentia uteri.

In the section on the preparation of the abdomen before operation they advocate the use of crystal violet and brilliant green, and bring forward evidence to show that this antiseptic is more certain than iodine as ordinarily used. We cannot agree with the authors that abdominal drainage is better than vaginal, and we believe that the discharge is freer and continues longer from the upper opening because the drainage is less efficient and the track more extensive. The description of the operations necessary for the removal of cervical myomata is good, and should prove helpful to the young operator. The section on extended abdominal hysterectomy is very good and full; it is a pity that the authors have not brought their results up to date, as their experience is a large one, and a good deal of doubt is arising in the minds of many gynæcologists as to the ultimate value of this operation. There are those who believe that the time is coming when it will be displaced altogether by the use of radium.

The operation of myomectomy is one that appeals very much to the authors. We are not sure that their arguments are convincing, and fancy that most surgeons will still regard myomectomy as an incomplete operation only suitable for a limited number of cases, and that when the uterus is the seat of multiple fibroids it is better removed. Section of the uterus is suggested too often, in our opinion, in this book. We regard utriculoplasty as an unnecessary and dangerous operation which will not survive, and we cannot agree that hysterotomy is ever indicated or proper as a preliminary to scraping the endometrium or for the purpose of removing a mucous polypus. The recommendation of Cæsarean section for the great majority of cases of placenta prævia would, if carried out in any number of cases, most certainly increase the death-rate to the mothers without increasing the number of children which would survive. It must be remembered that the risk to the child is due to a number of factors, that the results of Cæsarean section in cases of premature children are most discouraging, and only some 30 per cent. of all cases of placenta prævia go to full term. The recommendation to evacuate the uterus in cases of tuberculosis and then to sterilise the patient by tying the tubes is opposed to the most recent observations on this subject, which show that the safety of the patient is best assured when the uterus is removed intact by hysterectomy and not emptied first.

There is much of extreme interest in this book, the operations are clearly described, and the diagrams are very good. The positions taken up are not, in our opinion, as we have indicated, always unassailable, but the authors' views are founded on great practical experience. The book will be chiefly useful to the expert who is in a position to discount the partiality for obstetric surgery as opposed to obstetric medicine. The coloured illustrations are well reproduced and the index is a good one.

MEDIÆVAL MEDICINE.

By JAMES J. WALSH, M.D. London: A. and C. Black, Ltd. 1920. Pp. 216. 7*s*. 6*d*.

Dr. Walsh's books on mediæval medicine are always interesting, but when we read them we are reminded of a remark by a character in Conan Doyle's "Rodney Stone" concerning the relative merits of pugilists of different nationalities: "When you get a good Irishman you can't better 'em, but they're dreadful 'asty." For Dr. Walsh, though a learned man and an enthusiast in mediæval medicine, is prone to make unfounded statements. We were impelled to point out this trait when we reviewed his work on the "Thirteenth Century,"[1] and the same hastiness is obvious in the book now before us. Quite early in the book (p. 7) we find the following statement:—

"Among them are particularly to be noted certain members of an Arabian family with the title Bachtishua, a name which is derived from the Arabic words *Bocht Jesu*—that is, servant of Jesus—who having studied among the Greek Christians in Asia Minor, were called to the court of Haroun al-Rashid and introduced Greek medicine to the Mohammedans."

Now the Bachtishuas were not Arabs, but Syrians, and they did not study among Greek Christians in Asia Minor, but among Nestorian Christians at Gondisapor, in Persia, although it is true that their medicine was Greek. On p. 12 Dr. Walsh refers to the commonly received opinion that Aristotle dominated mediæval thought with the implication that this opinion is wrong. On p. 13 he mentions that in another work he had given quotations from Albertus Magnus and Roger Bacon to prove that mediæval scientists did not go by authority, but by experiment and observation; and finally, on p. 16, he refers to the fact that Roger Bacon wanted the Pope to forbid the study of Aristotle. And why? Because, to quote Dr. Walsh's own words—

"His works were leading men astray from the true study of science—his authority being looked upon as so great that men did not think for themselves, but accepted his assertions."

No one denies the greatness of Aristotle's intellect, but the obsession of his authority undoubtedly did do harm to the study of natural philosophy. For instance, until Galileo showed that Aristotle was wrong everyone believed that if a 10 lb. weight and a 1 lb. weight (supposing them to be the same shape) were dropped from a height, the 10 lb. weight would strike the earth first, because Aristotle had said that it would; and even when Galileo made his well-known experiment from the Leaning Tower of Pisa, and showed that the two weights struck the ground simultaneously, many people still maintained that Aristotle was right and that Galileo must have made a mistake.

The most blatant of Dr. Walsh's hasty statements is the following (p. 174). He is talking about the number of hospitals which were founded in Europe at the instance of Innocent III., and undoubtedly there were many. But in his zeal for his favourite century and Pope he says:—

"The traditions with regard to France are quite as complete as those that concern Germany and the great hospitals of London—St. Thomas's; St. Bartholomew's, which had been a priory with a house for the care of the poor, but was now turned into a hospital; Bethlehem, afterward Bedlam; Bridewell; and Christ's Hospital, the first of which afterwards became a prison, while Christ's Hospital, though retaining its name, became a school. The Five Royal Hospitals, as they were called, were either founded or received a great stimulus and thorough reorganization during the thirteenth century."

Again, on p. 200 Dr. Walsh says:—

"Bedlam in England, which had been the old Royal Bethlehem Hospital for the care of all forms of illness, came to be, just before the end of the thirteenth century, exclusively for the care of the insane."

Now, let us see the facts. St. Thomas's Hospital was certainly founded in 1228 by Peter de Rupibus. So

[1] THE LANCET, May 9th, 1908.

far Dr. Walsh is correct. St. Bartholomew's Hospital was founded in 1123, together with a priory; the hospital came first, the priory second. There was no turning into a hospital in the thirteenth century; neither is there any evidence of great stimulation or thorough organisation during that century. Bethlehem Hospital—i.e., the Hospital of St. Mary of Bethlehem without Bishopsgate—was founded as a priory in 1247, and is not called "hospital" before 1329, while the earliest record of lunatics being cared for there is 1377. The Royal Commission of 1403 mentions six lunatics as being in the hospital under restraint. This Commission, we expect, is that to which Dr. Walsh refers on p. 188 when he says:—

"There is definite evidence of Bethlehem in London, afterwards known as Bedlam, containing lunatics during the thirteenth century, for there is the report of a Royal Commission in the next century stating that there were six lunatics there who were under duress."

But he seems to consider that the thirteenth century includes all years beginning with the number 13—or in the case of Bridewell extending to years beginning 15—for Bridewell did not exist until 1522, when it was built in the lordly Tudor way by Henry VIII. for the reception of the Emperor Charles V. Edward VI. gave it to the city on the appeal of Ridley, Bishop of London, as a workhouse for the poor and a house of correction for "the strumpet and idle person." Christ's Hospital did not "retain its name" on becoming a school, but was given it then—i.e., in 1555—the school being housed in what was left of the old Grey Friars Monastery, which was despoiled by Henry VIII. The monastery had been founded in the thirteenth century, but the foundation had nothing to do with the school.

On p. 207 we find another hasty statement; Dr. Walsh quotes a decree of the Emperor Frederick the Second as to the practice of medicine in the Kingdom of Sicily, which states that "no one be permitted to take up the study of medical science without beforehand having devoted at least three years to the study of logic." Dr. Walsh then says in a footnote—

"Under logic at this time was included the study of practically all the subjects that are now included under the term the seven liberal arts."

We should much like to know his authority for this statement, especially as "this time" is 1231.

As for the rest of the book, there are some interesting illustrations and pleasant chat about Salerno and some of the mediæval surgeons, such as Lanfranc and Mondeville, but we cannot regard the work as a serious contribution to the study of mediæval medical history.

TUBERCULOSIS AND PUBLIC HEALTH.

By H. HYSLOP THOMSON, M.D., D.P.H. London: Longmans, Green, and Co. 1920. Pp. 104. 5*s*.

Dr. Hyslop Thomson is a bold author, who has attempted to provide a short and concise study of tuberculosis in relation to public health of interest to both medical and non-medical readers. The book is certainly short and up to a certain point concise. It is also full of information which will, no doubt, in the author's words, "assist in removing some of the popular misconceptions which exist with regard to various aspects of this disease." To the medical profession in general, and to the tuberculosis specialist in particular, this book will seem sketchy and incomplete, though here and there the author gives first-hand information of real value. Approaching the subject as he does from the point of view of the medical officer of health, his survey is necessarily wider than that of the tuberculosis specialist who is apt to study the disease as such, rather than the complex fundamental factors of which tuberculosis is a late by-product. Referring to the problem of housing, the author asks why, if it is possible to build houses calculated to maintain the health of the individual with arrested tuberculosis, such houses are not erected on an extensive scale so as to prevent the development and spread of the disease in the healthy population? We repeat this question.

The author does not consider tuberculosis as a highly infectious disease, and he maintains that if certain precautions are taken, the risk of infection from contact with open cases of tuberculosis becomes very slight indeed. This belief of his may be contrasted with his statement that the "segregation in suitable institutions of advanced cases of open pulmonary and non-pulmonary tuberculosis is a measure which has far too long been delayed, and is the one which should constitute the foundation of every scheme of treatment."

RULES FOR RECOVERY FROM TUBERCULOSIS.

Third edition, thoroughly revised. By LAWRASON BROWN, M.D. Philadelphia and New York: Lea and Febiger. 1919. Pp. 192. 15*s*.

IT is given to few authors to write a book for the lay public so full of important matter, well digested, that medical practitioners and even specialists in tuberculosis may read it with great profit to themselves. In the present edition some details have been added as to the values of foodstuffs, and a liquid diet has been outlined with special reference to patients with failing appetite. Many other changes have been made here and there to keep the book abreast of the times. But these changes concern details rather than principles, and the absence of marked changes in the present edition is a tacit tribute to the soundness of the teachings of the previous edition. As the author generously admits, much of this book represents the expressions, similes, ideas, and teachings of the pioneer in the art of imparting advice to tuberculous patients—the late Dr. Trudeau.

In fact this book represents the life experience of a patient who turned disaster into victory, as well as the views of one of America's greatest living authorities on tuberculosis. The author is cheery and optimistic throughout, but he is also careful to convince the reader that tuberculosis takes years to cure. In this connexion he points out that 38 per cent. of all the patients treated at the Trudeau Sanatorium have died, although in many of these cases death was not inevitable; had but the patients practised common-sense they would still have been alive. With regard to alcohol the author accuses private sanatoriums in Europe of prescribing alcohol more freely than similar institutions elsewhere. He has nothing good to say of alcohol, and he notes that since the death of Dr. Austin Flint, no great student of tuberculosis in America has advocated its use. Many a sanatorium physician will find parallels to the case of the conscientious but unintelligent patient who, being told to walk only 10 minutes a day, saved up his exercise for a week and then took a 60-minute walk. The recent violent swing of the pendulum against tuberculin is not reflected in the author's estimate of this remedy. He does not claim to understand its action fully, but he notes that it achieves remarkable results in a few cases. Another small group of cases cannot tolerate it, but the vast majority take it well, although they experience, apparently, little benefit from its use. The author's choice of text wherewith to head each chapter is usually apt, but when he heads his chapter on the care of the mouth with: "Out of thine own mouth will I judge thee," his exercise of the poetic licence seems a little free.

SANITATION AND HEALTH IN INDIA.

A MANUAL OF CONSERVANCY. By JAHAR LAL DAS, L.M.S. Cal. Univ. London, India, Winnipeg, and Sydney: Butterworth and Co. 1919. Pp. 190. Rs. 5.10.

PERSONAL HYGIENE. By M. R. SAMEY, M.D., D.P.H., M.O.H. Same Publishers. 1920. Pp. 96. Rs. 3.

BOTH these books are written with special reference to India and with the praiseworthy objects of promoting respectively the sanitation of the country and the hygiene of the person. Mr. Jahar Lal Das, who is health officer to the district board of Burdwan, deals with the removal and disposal of refuse of all descriptions, the management of cattle employed on conservancy work, and the prevention of disease among them. Illustrations of the various kinds of apparatus necessary for carrying out the work are used freely to

elucidate the text, and an appendix sets out Indian local sanitary laws. There is also a chapter on ankylostomiasis from the point of view of its intimate relation with the pollution of the soil. Professor Charles A. Bentley, the Sanitary Commissioner for Bengal, who writes an introduction to the book, points out that the sanitary reformer in India is often discouraged by the ignorance and apathy of the population and by the defective sanitary organisation. This little manual, while helping the sanitary inspector, should also assist in educating the more intelligent classes with regard to some of those things on which the health of the community depends.

Dr. Samey's book keeps in mind the social, economic, and religious conditions which to some extent tend to modify the rules of health suitable to an English-speaking community, though, generally speaking, the laws which govern healthy living are the same for all peoples. Foods may differ, but the need for fresh air and cleanliness is everywhere the same. The chapter on Regulating the Passions is somewhat novel for a book of this kind, though quite relevant; here it is pointed out that emotion will arrest, alter, or modify the various organic secretions, the only guarantee for a long life of health and happiness being a constantly cherished even, cheerful, and hopeful spirit. Dr. Samey has compiled a useful little manual.

MARINE HYGIENE AND SANITATION.

A Manual for Ships' Surgeons and Port Health Officers. By GILBERT E. BROOKE, M.A. Cantab., L.R.C.P. Edin., D.P.H., F.R.G.S. London: Baillière, Tindall, and Cox. 1920. With 4 plates and 27 figures in the text. Pp. x. + 409. 15*s.* net.

THIS book breaks new ground. Others have told the ship's surgeon what to do on board his ship and have mentioned his relations with the sanitary authorities of the ports he visits, but this book tells him what the sanitary authorities want, why they want it, how he can help them most effectively, what returns he should have ready for them, and how therefore he can most quickly and certainly secure for his ship the shortest period of the expensive and unpopular delay "at quarantine." The ship's surgeon who knows this book and acts up to its advice will earn golden opinions from his captain, and may even get a bonus from his company if its directors are wise. The ship's surgeon is here taught to be methodical in the preparation of such information as is required by the visiting medical officer.

The book is well written and well illustrated, though there might have been a plate of stegomyia and other mosquitoes. Its accounts of the "origines" of naval hygiene are interesting always; but has the author ever heard of Lind, who is unmentioned in relation to scurvy, and is he the "Lynn" of p. 82, who invented the distillation of water on board ship? The author, who is port health officer at Singapore, has also a good book on tropical disease to his credit. He has visited and made sanitary examinations of many ships, and from his experience easily convinces us of the loss British ships suffer both in hygiene and comfort for want of a sanitarian to give approval to their design. It is only when the ship is built and in service that a sanitary inspection is held, and the defects then found are often so bewildering that they cannot all be put right. The building of standard ships by Government during the war raised the level of crew accommodation, the unions also are getting interested and taking action, and though the Ministry of Health has not yet taken a hand in the matter the hygiene of crew spaces is improving. Dr. Brooke's form on which to enter up the sanitary survey of each ship is well thought out. It is satisfactory to find that he constantly quotes with approval the Admiralty Transport Regulations, under which so many soldiers have been taken about the world in this war. As regards beri-beri, Dr. Brooke, living in the midst of beri-beri and polished rice, is of opinion that beri-beri is due to a micro-organism, present in hot and moist air, finding in polished rice its favourite soil, with an antagonist in the pericarp of the rice grain, an opinion heretical just now, but yet with reasons behind it, as every reader will see.

The author's first aim is to prevent cases of dangerous disease from eluding his observation; secondly, in every way to avoid unnecessary detention of ships which would hamper trade. The modern practice, for which he pleads, is to disinfect a ship at the infected port of departure, that it may be unnecessary to do so at the port of arrival. Dr. Brooke foreshadows a time when appointments as port health officers will by statute be given only to men who have served at sea, have a thorough knowledge of tropical diseases, and have specialised in port work.

THE LOCAL WAR PENSIONS COMMITTEES' HANDBOOK.

THIS handbook, which consolidates the circulars and instructions issued by the Ministry of Pensions, other than those concerning the functions of the Special Grants Committee, has now been placed on sale (price 2*s.*) by H.M. Stationery Office. Arranged in five parts, corresponding with the main divisions of the work of the local committees, it replaces the Instructions for the Assessment of Alternative Pensions, 1917, Instructions and Notes on the Treatment and Training of Disabled Men, 1917, Instructions on the Treatment of Disabled Men, 1918, and Ministry of Pensions Circulars issued prior to Jan. 1st, 1920. The handbook itself affords a comprehensive and detailed summary of information which will be valuable to all interested in the administration of pensions and the after-care of the disabled, while among the Appendices will be found the complete text of the Royal Warrant of Dec. 6th, 1919, under which soldiers' pensions are awarded.

JOURNALS.

Tubercle. A Monthly Journal Devoted to All Aspects of Tuberculosis. Vol. I., No. 7. April, 1920.—The pièce de résistance in the April number is an article by Professor C. Saugman on Extrapleural Thoracoplasty, in which he traces in considerable detail its history, technique, and results. The indications are practically those for artificial pneumothorax, and in every case this should be tried first. The operation should also give place to Jacobœus's cauterisation of adhesions or to local plastic methods or excision after removal of small pieces of rib, when these milder procedures are possible. Thoracoplasty is recommended in chronic fibrosis, especially with basal cavitation, apical cavities being more difficult to compress and sometimes requiring removal of the upper ribs in front besides the posterior resection. Based on Friedrich's operation (1907), the method now advocated by Professor Saugman has been so mitigated as to be relatively safe. Local anæsthesia is used, except when intolerance to novocaine-suprarenin has been found at the attempted artificial pneumothorax, and the operation is divided into two stages separated by an interval of a few weeks. At the first stage ribs 11 to 5 are attacked, and at the second stage ribs 4 to 1. It is important to remove part, if only a small part, of the first rib. The article is well illustrated and is documented with a synopsis of the 40 cases treated from 1916 to 1919. Of ultimate results it is yet early to speak, but the fact that 13 patients are already at work speaks well for the future treatment of some desperate cases. An abstract of an article by Dr. P. Bull, of Christiania, gives his experiences of practically the same operation, and he reckons on getting a "curative result" in about one-third of the cases.—A series of abstracts on tuberculous adenitis raises the difficult question whether this affection confers any immunity to pulmonary tuberculosis, but the answer remains doubtful. Dr. W. R. Abbott, of Springfield, Ill., lays down useful guiding principles for the treatment of cervical adenitis. First, correct any error in the area from which lymph drains to the affected glands—e.g., teeth, tonsils, ears. Next, operate early if enlargement, softening, or tenderness of the glands is present, but do not operate when glands have broken down and the

disease has extended deeply. In some of these cases aspiration with injection of cinnamon and benzoin is recommended. Thirdly, the author is strongly persuaded of the value of tuberculin above all other remedies, and the drug is found to be more efficacious when injected in the area from which lymph drains to the affected glands.—The relation of influenza to tuberculosis is the subject of a critical review which draws attention to recent doubts whether influenza predisposes to tuberculosis. There is a useful bibliography.

Giornale di Clinica Medica.—This new monthly periodical is published in Bologna under the editorship of Professor Umberto Gabbi, who founded it and issued the first number last January. Each number consists of about 50 pages printed on cream-laid paper in clear type. Besides original communications there are many abstracts from foreign sources arranged under headings such as therapeutics, infective diseases, cardiology, endocrinology, tropical pathology, &c.; these are particularly full and carefully done. In addition to notices of new books there are some items of general medical interest. The March number contains three original articles in reference to encephalitis lethargica. P. Guizzetti describes six autopsies of patients between 17 and 44 years of age who died from this disease after a duration of from 6 to 35 days. In the early cases there was hæmorrhagic encephalitis of the optic thalami and round the aqueduct of Sylvius; in the later cases naked-eye examination of the brain and spinal cord was practically negative. Microscopically there were accumulations of lymphocytes and pyroninophile cells (Pappenheim) in the perivascular lymphatic sheath and scattered foci of inflammatory infiltration. Investigations on micro-organisms proved negative. Professor Gabbi investigated personally the oculo-cardiac reflex in cases of encephalitis which occurred in an epidemic in Parma in 1919. He found that this reflex was markedly exaggerated and that this phenomenon also took place even when the cornea was anæsthetised by cocaine. Dr. Giuseppe Gotti describes an epidemic of cases of hiccough which occurred at Ravenna in December last, and was almost synchronous with an epidemic of lethargic encephalitis. In many cases of the latter there was a monomuscular clonus observed, comparable to the diaphragmatic clonus which characterised the previous epidemic of hiccough, which seemed to be due to some disorder of the central nervous system.

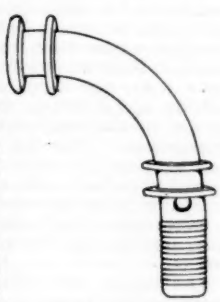
Rivista d'Ostetricia e Ginecologia Pratica. January, 1920.—This periodical enters its second year with this issue. The publication is of an eminently practical character and accepts contributions on obstetrics and gynæcology from all sources. Moreover, it publishes the proceedings and transactions of the Sicilian Society of Obstetrics and Gynæcology. Another feature is that it limits its advertisement pages to products of national industry, being convinced that Italy can hold its own in this respect. The present number contains communications by Dr. F. Cusmano on a case of Perforation of the Gravid Uterus at the Third Month with a Strangulated Cervico-vaginal Intestinal Hernia; by Professor F. Chidichino on a case of Vesicular Mole; and by Professor G. Giglio on the Trend of Maternity Help at the Present Day.

Acta Societatis Medicorum Fennicæ "Duodecim."—A natural corollary to Finland's re-birth as an independent State is the ambition on the part of Finnish scientists to publish their works under their own auspices. Hitherto works by Finnish medical men have largely received publicity at the cost of mersion, not to say submersion, in the medical journals of the chief European countries. Purely from the scientific point of view, this pooling of knowledge is praiseworthy, but the Nationalist point of view cannot be ignored, and it is obvious that the rôle of guest in the house of a stranger is apt to prove galling. In the past Finnish writers wishing to publish their works at home have found the medium of the Swedish and Finnish languages too cramped; they mean little or nothing to the world outside the Scandinavian countries. It seems, therefore, a wise compromise for Finnish scientists to publish an independent Finnish journal in English, French, or German according to the linguistic capacity of each author. All the papers in the first three volumes of "Acta" happen to be in German. Of their high scientific standard there can be no doubt. In the first volume Dr. J. A. Murto writes about Die Thermoresistenz der Syphilissera and Dr. H. R. Malmio about Das Alter der Menarche in Finnland. In the second volume Dr. Murto's paper is concluded, and Dr. B. Grönroos deals with Untersuchungen uber die Wassermannsche Reaktion bei der Primärsyphilis. The two papers in the third volume are anthropological, and deal with the development of the jaw in man and the length of the intestines in Finnish adult males. These five papers run to nearly 400 pages, and it is therefore a pity that the authors have not made a rule of printing a summary of their findings at the end of each paper as a concession to readers with limited time. The cost of each volume is provisionally put at 10 Fmk., and subscriptions and offers to exchange journals should be addressed to the Editor-in-Chief, Nervanderinkatu 8, Helsinki, Suomi (Finland).

New Inventions.

A TUBE FOR DRAINING THE BOWEL.

THERE is often difficulty in keeping a tube satisfactorily fixed in the bowel that would at once allow drainage of the latter to take place and prevent leakage occurring too soon. In many instances the tube slips out before it is desirable that it should do so, with all the inconvenience and risk that attends such a contretemps. After trying tubes of various kinds, it has been found that the tube illustrated in the diagram overcomes these objections. It is made of metal, has comparatively large flanges, between which the bowel can be sutured round the tube, tightly enough to prevent it from slipping, and yet not so tightly as to lead to a rapid necrosis of the coats of the bowel grasped in the suture-ligature. The chief feature of this tube, however, is the flexible, closely wound spiral spring which forms a continuation of the rigid tube, and lies in the lumen of the bowel. This acts as an internal splint, thereby overcoming the tendency of the tube to fall over to one side—an occurrence which, in the case of some tubes employed in this way, would appear to be the cause of them slipping out of the bowel. These tubes have been used in many cases spread over a number of years, and there has not been any instance in which a pressure necrosis of the wall of the bowel has been produced by the flexible portion. A large opening at each side of the tube allows for a free escape of flatus. In cases where the large bowel has to be brought out permanently, a tube having the spiral portion set at a right angle to the rigid part may be employed, as this shape permits the internal portion to lie outside the abdominal cavity. When dealing with a greatly distended small bowel, in cases of acute obstruction, it has been my practice for the last 25 years to empty the proximal bowel and return it into the abdomen, often with great advantage. At first I employed a rigid tube for this purpose, but many years ago designed one with a flexible part 9 inches long which has proved a great improvement over the rigid tube, in that it takes the turns of the bowel easily, and in consequence allows of a greater length of bowel being threaded upon the tube as the emptying process continues.



These tubes have been made for me by Messrs. Baird Bros., 97, Bath-street, Glasgow.

J. HOGARTH PRINGLE, M.B., C.M. Edin.,
Glasgow. F.R.C.S. Eng.

THE LANCET.

LONDON: SATURDAY, APRIL 24, 1920.

International Health.

AN International Health Conference has been sitting in London at the Ministry of Health, the delegates of the Conference being as follows:—

Chairman.—Viscount Astor.

France.—M. Brisac; with M. Leon Bernard, M. Boujard, and M. Thiebault as technical advisers.

Great Britain.—Sir George Newman (when his other engagements permitted, but the Britain vote was left with Dr. Buchanan) and Dr. G. S. Buchanan, C.B.; with Dr. Steegmann as technical adviser.

Italy.—Dr. Lutrario, Dr. Fornaciari, and Dr. Druetti.

Japan.—Dr. Yoneji Miyagawa; with Mr. Kakichi Kawarata as technical adviser.

United States.—Surgeon-General Rupert Blue.

League of Red Cross Societies.—General Sir David Henderson, K.C.B.; with Colonel R. P. Strong, U.S.A., as technical adviser.

Office Internationale d'Hygiène Publique.—Dr. Pottevin.

The Belgian and Brazilian Governments were invited to send representatives, but owing to the alteration of the date of the Conference their delegates were unable to be present. The Secretaries of the Conference were Dame Rachel Crowdy (League of Nations) and Mr. L. G. Brock, C.B. (Ministry of Health).

There attended, as additional members for discussion of typhus in Poland, Dr. Chodzko (Vice-Minister of the Polish Ministry of Health), and Dr. Rajchmann.

The Conference was convened by Dr. ADDISON, British Minister of Health, at the request of the Council of the League of Nations, and its first purpose has been to consider the erection of an International Health Office under the League, roughly as a parallel to the International Labour Office provided under the covenant of the League and, moreover, recognised by the Peace Treaty. There is a clear statement in that covenant that the League of Nations would concern itself with international health, and in the knowledge that he would meet with the sympathetic support from other nations supporting the League, Dr. ADDISON convened a preliminary informal Conference last July. At this Conference a memorandum on the whole subject of the erection of an International Health Office under the League of Nations, setting out the lines on which it might be organised, had been prepared by the Ministry of Health, and was submitted last summer to representatives of the public health services of Great Britain, the United States, France, Belgium, the Office Internationale d'Hygiène Publique, and the League of Red Cross Societies, the steps being taken by the British Ministry of Health after consultation with the acting secretary-general of the League of Nations. A formal memorandum was then prepared and submitted for consideration, embodying general principles and ideas, and it was agreed that this more or less complete scheme should form the basis for subsequent discussions at which representatives of the provisional international secretariat of the League of Nations could be present. The formal conference having taken place last week, a formal scheme was drawn up to be submitted to a formal international conference, which it was hoped would be convened for the purpose by resolution of the Council of the League of Nations. This is the present position, and we have set it out in detail, as it is important that medical men should understand both the plans for the maintenance of health which it is proposed should be put into action under the covenant of the League of Nations, and also the deliberate and thoughtful actions precedent to those plans. And we may say here that the scheme arrived at is, in our opinion, suitable, far-reaching, properly comprehensive, and capable of extension to meet subsequent circumstances.

The scheme provides for the formation of an International Health General Committee, to consist at the outset of delegates appointed by all the Governments represented on the Committee of the Office Internationale d'Hygiène Publique, and of such nations as have not yet joined it, but are adherents of the League of Nations. It may, therefore, include representatives of Governments not as yet signatory to the covenant of the League of Nations, but who have signed the Convention of Rome of 1907—a very significant point when we remember the position of the United States of America with regard to the League, and of Japan with regard to the Office Internationale. The recognition of the Office Internationale d'Hygiène Publique, which has been sitting in Paris, has been rightly earned by much good work, as those who have read the notes on its Bulletins in our columns will recognise. Subject to the approval of the Governments signatory to the Rome Convention, the Office Internationale will form an important part of the new International Health organisation under the direction of the League of Nations. The General Committee will only sit as occasion may require, though not less than once a year, but a much smaller Executive Committee is provided for, to meet at least quarterly, with powers to settle questions requiring urgent consideration. On such matters the Executive Committee can appoint its own subcommittees, calling in technical advisers on special points. The chairman and members of this body are only elected for three years, but are eligible for re-election. To them will be committed the duty of choosing the medical secretary and the necessary staff, and they will be responsible for the conduct of the office at the seat of the League of Nations. They will be empowered to draft new covenants, to revise existing ones, and to conduct all the business of obtaining technical, trade, and other advice, and of reporting for the consideration

of the Council of the League of Nations any default on the part of the members of the General Committee. For under the deliberations of the larger and controlling body all the conventions must come, each member having it as his duty to bring any new or modified convention before the authority within whose competence the matter lies.

The functions of such an International Health Office, as provided for in the scheme, open before us a vista of international health which has long been the ideal of all medical men. Medical men have seen from the moment that the idea of the League of Nations took shape in a practical form that their science would constitute one great thing whose international character could never be disputed. It is to the benefit of the world that the health of the world should be bettered, and that universal and harmonious schemes of prevention should be given full play. It is proposed that the Office should be constituted with the duty of advising the League of Nations in matters affecting the health of the world, bringing administrative health authorities in different countries into immediate relationship with each other. Rapid interchange of information will be secured thereby, when world-wide precautions against epidemics can be taken. A ready method for revising international agreements as to administrative action in matters of health will come into being, and international suppression of cholera, yellow fever, and plague can be undertaken, prompt action meeting new conditions as they arise. In two respects the International Health Office shows both a broad outlook and a sympathetic attitude in its proposals. First, the Office is to be advisory to the International Labour Office on health questions. We have only to think of the sections of the populations concerned, whose immediate and personal interests will be most nearly affected by health regulations, to see how necessary it is that international labour should be in full accord with international hygiene. If inside the League of Nations a new organisation, having international outlook, can agree on the policy which is alike best for health and best for labour, a large proportion of the administrative difficulties will disappear, and before various ratifying bodies persons who would otherwise have been disputants will find themselves joint advocates. That this will be so is further assured by the presence upon the Executive Committee of a representative chosen by the governing body of the Labour Conference. Secondly, it will be the duty of the International Health Office to advise with the League of Red Cross Societies. The obvious benefit to the Red Cross is that it will receive prompt information and practical help when measures have to be taken to deal with emergencies, while the splendid organisation of Red Cross can be employed to its full value by the League.

The scheme is full of promise, and we have a right to be proud of the conspicuous part played by British energy and foresight throughout the deliberations for establishing the International Health Office. This much praise of our Ministry of Health ought not to look parochial even to advanced internationalists.

The Neutrophile Index.

THE Arneth reaction, to which Dr. H. A. TREADGOLD has drawn attention in a recent number of THE LANCET, has attracted little notice in this country, though it would appear to have considerable importance, especially in the prognosis of cases of pulmonary tuberculosis. This neglect may possibly be due to the laborious technique which the estimation of the index entails, for it demands more time and care than the clinical pathologist is usually able to afford. One observer states that he counted 40,000 leucocytes before his results coincided with those obtained by ARNETH, though after this intensive training he became proficient and had no further difficulties. The white cells in the circulatory blood number some 7000 in a cubic millimetre, of which about 5000 are neutrophile, or polymorphonuclear, leucocytes, and it is common knowledge that the total number and relative proportion of these cells may vary very greatly in certain pathological conditions. Indeed, the differential leucocyte count is one of the most valuable commonplaces of clinical pathology. ARNETH attempts to carry the matter a step further, and his reaction depends upon the recognition that the number of the lobes of the nuclei of the neutrophile leucocytes vary in certain infectious diseases, though in health they remain constant. This variation consists in the presence of an unusually high proportion of cells possessing single or bilobed nuclei, and a relative diminution of the types with three-, four-, or five-lobed nuclei. Expressed numerically, the Arneth index for normal blood would be 40:60, where 40 is the number of leucocytes of the first group, 60 that of the second group. In disease, for example in progressive pulmonary tuberculosis, an index might be 88:12, a variation which ARNETH describes as a shift to the left; very rarely the shift is to the right.

The explanation of this shift is still a matter for speculation, since we lack exact knowledge of the life-history of the mature blood leucocytes. The origin of the granular leucocytes from the parent tissue of the bone-marrow is well established. Under abnormal conditions lymphadenoid tissue may give rise to a certain number of neutrophile cells, but this accessory production is never of great importance, and in disease, as in health, the bone-marrow is the chief leucopoietic tissue. But while we know something of their origin, we know very little about the white blood cells after they enter the circulation. How long they survive and what is their ultimate fate are questions which still remain to be answered. Under normal conditions many leucocytes dis-

appear from the body by emigrating on to the surfaces, especially of the respiratory and alimentary tracts. Others, presumably senile ones, are phagocytosed by endothelial and reticular macrophages in the spleen and the lymphatic glands. And in many inflammatory conditions, apart from an exaggeration of these processes, enormous numbers of leucocytes are disposed of in the form of pus. Similarly, our knowledge of the actual structure of these cells is far from finite, and it is by no means certain that the morphology of the mature leucocyte is constant. Some observers claim that the nucleus alters its shape during amœboid activity of the cells, though it is doubtful whether this alteration is ever fundamental, whether, that is to say, nuclear bridges ever become so attenuated during physiological activity as to simulate the fine filamentous connexions of the multilobed nuclei. The shape of the nucleus, however, may be altered by adverse physical circumstances—i.e., by over-heating; and, as a degenerative process, nuclear agglutinations may give rise to uninucleate forms, while the actual bulk of nuclear matter may be diminished by fragmentation with separation of small particles.

Two theories of the Arneth index are in vogue. According to one point of view it represents an increased proliferative activity of the marrow, and a consequent flooding of the circulating blood with young or immature leucocytes. The other theory ascribes the preponderance of the simpler type of cell to a disproportional destruction of the mature, more actively phagocytic leucocytes. Both these conceptions depend on the assumption that the age of the leucocyte may be deduced from the degree of lobulation of its nucleus. It is probably true that the maturity of the cell can be deduced from the actual bulk of nuclear matter present. Thicker segments and broader bridges indicate a younger cell, while smaller lobes with delicate filamentous connexions suggest senility. Beyond this, however, it is scarcely justifiable to go. Again, the suggestion contained in the second theory that phagocytic activity is the prerogative of the mature or even senile cell is, on the face of it, not highly credible. Of even greater theoretical importance is the question why the Arneth shift to the left should occur at all in tuberculosis. A leucocytosis is a definite expression of an immunity reaction on the part of the body, and is called forth by a variety of toxic agents, particularly the toxins of certain microbes. But the tubercle bacillus, like the organisms of typhoid fever and certain other infections, calls forth no neutrophile leucocytosis, and the modern tendency is to look on the lymphadenoid tissues as the ones chiefly concerned in the immunity response. It is difficult to understand, therefore, how a pure infection with the tubercle bacillus can so disorganise leucopoiesis as to affect the neutrophile leucocyte. Neither of the current theories is adequate to explain this, and it is clear that much work remains to be done before we can dogmatise on the subject.

The Budget.

THE Budget, introduced by the Chancellor of the Exchequer on April 19th, calls upon us all to sustain the finances of the country as best we can. Increased taxation in many directions reflects the price of national safety, and implies also personal sacrifices in many directions. We are glad to note that, generally speaking, the necessaries of life have escaped the Treasury net. Beer, wine, and spirits will cost the consumer more, and in some instances the increased taxation on such commodities is very heavy, the receipts from these sources being estimated at an advance of approximately eighty millions. This decision may well have a marked effect in diminishing the consumption of alcoholic liquors. Postage will cost more, and there will be few, even to the poorest, exempt from this burden. Proprietary medicines, which are curiously bracketed in the same category as playing-cards and coffee mixtures, are anticipated to yield a sum equal to that of the previous financial year. In regard to motor vehicles, taxation as from January, 1921, is to be based on weight in the case of those used for trade purposes, upon seating capacity in the case of hackney carriages, and upon horse-power unit in the case of ordinary cars. In this connexion it may be noted that the abatement of duty granted in the case of motor-cars used by medical practitioners or veterinary surgeons will cease on the same date, when also the motor-spirit duty will be abolished. Medical men therefore cease to receive preferential treatment in respect of the purpose for which they use their cars. The chairman of the Medico-Political Committee of the British Medical Association points out in a letter which appears in the current *British Medical Journal* that the medical profession will be injuriously affected by the proposed changes. Their cars are used exclusively for purposes of medical practice, many of them having a nominal power which is much exaggerated by the R.A.C. formula. If all rebates are abolished the extra cost to the owner of a 21 h.p. car (R.A.C. rating), doing a mileage of 7500 in the course of the year, will be £11 12*s*. On a larger mileage the extra cost, of course, decreases pro rata. Rural practitioners may further suffer from the necessity of keeping two cars in order that they may not be prevented attending an urgent call owing to a car breakdown. Also of some medical interest is the fact that the Chancellor has found an increased source of revenue in tobacco, which he attributes partly to the popularity of cigarette smoking amongst women. No harm to the nation will result from a diminution in this indulgence, at present carried to grave excess by both sexes. Substantial relief in income taxation is proposed in the case of families with moderate incomes. On the whole, the financial proposals seem framed on democratic and reasonable lines, having regard to the colossal financial requirements of the country. It would be anti-social to find fault with the general policy of the Treasury, which seems aimed most at the resources of those who still live comfortable lives and have something over.

Annotations.

"Ne quid nimis."

THE APPROVED SOCIETIES' VIEW OF STATE MEDICAL SERVICE.

AT the recent annual conference of the National Health Convention of the Association of Approved Societies a resolution was carried in favour of substituting a comprehensive State Medical Service for the existing panel system and public health services, in order to secure to the whole population at the national expense the most efficient and complete service that medical, surgical, and dental science can offer. The resolution gives in effect the most recent and explicit definition of what is implied in a State Medical Service—namely, the abolition of private practice, and the establishment of medical treatment provided by the State for all citizens. There is, indeed, much to be said for a non-contributory service to which all are entitled by virtue of their citizenship, and financed by a special public-health rate contributed in a manner similar to the education rate. It is already obvious that for a majority of the population medical treatment must be State-aided. The health of the individual has become the concern of the State and cannot be left entirely to individual responsibility. So far, so good. But the fallacy in the propaganda of the Approved Societies is the implication that the panel system is incompatible with a comprehensive and up-to-date medical service. Great extensions of the system are in contemplation, and it is of the first importance for the public to understand that these aim at providing a really efficient service at the hands of medical men who are general practitioners and who will retain a large degree of independence. The clinical practitioner responsible for the treatment of the individual citizen must not become an official person; he should maintain his present intimate relationship to his patients. As far as practicable the free choice of practitioner should be preserved to the citizen, and the scope of choice can be enlarged beyond its present range if treatment is centred at clinics where a number of practitioners are congregated. The Approved Societies demand a State Medical Service in which it appears that the doctors are to be salaried officials. We may ask: Are they prepared to merge themselves into a State Approved Society, a change which would appear desirable in the interests of efficient registration and control?

CLINICAL KINEMATOGRAPHS.

OF the value of the kinematograph film in education there can be no doubt, and recently an attempt has been made to employ the same appliance in the instruction of the medical student. It is clear that the method is likely to prove more widely useful in surgery than in medicine, for the medical conditions which can be usefully demonstrated in the kinematograph are somewhat limited. The ataxic gait can, indeed, be well shown, and various other nervous phenomena are equally easily demonstrable, but it is in the representation of surgical operations that the utility of the method will be most manifest.

A private demonstration was given last week by the Selig Film Company, in connexion with the Phillips Film Company, of some of the possibilities of the kinematograph in the teaching of surgery, when some excellent films were shown. The operation of gastrostomy was the first exhibited, the surgeon whose operation had been photographed was Dr. H. Lilienthal, and the several stages were very clearly seen. Another film exhibited was the placing on an inlay bone-graft to fix a chronic tuberculous knee-joint, by Dr. F. H. Albee. Here the use of the twin saw in cutting the inlay was excellently represented. This was done before the knee-joint was opened in order to avoid the risk of infecting the healthy bone. When the diseased joint was laid open portions of the femur and tibia were removed, the trough for the inlay was cut, and the insertion of the inlay followed; it was fixed in position and the wound was closed. A plaster splint was then applied. In this, as in the other films, the several stages were preceded by a short account shown on the screen of what was about to be done. Other films followed, and it may be said that, on the whole, they were all excellent. Each member of the audience—if we may apply that term when there was nothing to hear—could see perfectly the details of the operation—better, indeed, than if he had been present, for in nearly all operations there are only two persons who see everything that takes place—the surgeon and his chief assistant. And, indeed, it must be so; any attempt by the onlookers to get close enough to see everything would manifestly interfere with the operation. The camera is under no such disability; it is placed, in nearly all cases, above the table entirely out of the way of those taking part in the operation, and there it is able to record with perfect fidelity all that takes place. Films such as those shown at the private view cannot fail to provide valuable instruction to all studying the subject. Each film can be passed through the lantern at any speed desired, and the demonstrator can direct that it should travel slowly when it is wished that the details should be especially clearly seen. He can point out what is of importance and explain the reason of everything that is done. There is not the slightest difficulty in having the film passed once more through the instrument, if the demonstrator wishes to hark back to some point which has not been fully understood. We are told that there are some 600 films already prepared, and the number is being added to every week. Most of the leading surgeons of the United States have provided films in this series, and if we may judge of those we did not see by those that were shown their value must be very great. The company is willing to record the operations of any surgeon for his private use in teaching his classes, so that the students can see, before an operation is done, what the surgeon intends to do, and thereby they will gain much more advantage from seeing the operation itself than if they had not learned beforehand what they were to expect.

There are certain parts of an operation the repetition of which would be tedious; thus the suturing of a wound is of comparatively little interest in most cases, though sometimes the method in which it is done is of importance. Ordinarily, therefore, only the commencement of a suturing is shown and then there is a sudden jump to the completion of the suture. We would not be considered hypercritical, but there is one point in which we would suggest a definite improvement. We acknowledge freely the extreme value of the

method as exhibited to us, but the absence of colour cannot but deprive the exhibition of these films of some of their value. To see black blood flowing from the wound is certainly curious; moreover, the onlookers cannot distinguish clearly the different tissues, and we feel sure that coloured films of operations would quite double their value. Even as they are the results are excellent. We are well aware that to obtain coloured films would slow the action somewhat, but we feel certain that this improvement must come to pass.

RECOVERY FROM ADDISON'S DISEASE.

Dr. Raymond Giraudeau[1] devotes his inaugural thesis to the description of a case of Addison's disease, which ended in recovery, death occurring 11 years later from cancer of the stomach, when the autopsy confirmed the original diagnosis. The patient was a man, aged 39, the subject of chronic alcoholism, who on admission to hospital in November, 1901, presented well-marked asthenia, pigmentation of the skin, and buccal mucous membrane, diarrhœa with abdominal pain, and a feeble pulse. On Jan. 4th, 1902, he was given an injection of suprarenal extract, and the injections were continued for 12 days. Improvement took place in the general condition, and there was a marked increase in weight. The injections were resumed on Jan. 27th, when the abdominal pain and diarrhœa were very violent. On Feb. 1st the pigmentation had considerably diminished, and during the next two months disappeared from the skin and from the palate. The general condition of the patient had meanwhile improved so much that he was discharged in the summer of 1902. Except on an occasion when he was interned for an attack of alcoholism in June, 1904, he was lost sight of till February, 1913, when he was admitted to the asylum for another attack. Death took place on March 13th. Apart from carcinoma of the pylorus with metastases in the liver, the only lesion found post mortem was some scar tissue in the right suprarenal, indicating the occurrence of inflammation many years previously. The nature of the lesion could not be determined. There was no evidence of tuberculosis or syphilis in the other organs. Dr. Giraudeau comes to the conclusion that in cases in which generalised and transient suprarenal incompetence is the result of a localised inflammatory lesion treatment may be effective, whereas it is of no avail in caseous tuberculosis of the suprarenals.

INFANTILE DIARRHŒA AND VOMITING.

IN his article on p. 906 Dr. G. Douglas Sherwood calls attention to a subject of great contemporary importance. He claims that both diarrhœa and vomiting in infants are practically always of infective origin, and that both symptoms, either singly or in combination, can be prevented by certain antiseptic and aseptic precautions. It is satisfactory to learn that in Upwick Vale Home, where these prophylactic methods have been adopted, and from which the data of this paper are drawn, the system has given such favourable results, for similar attempts in other institutions both in England and on the Continent have proved signally ineffective in the prevention of epidemics of diarrhœa. The management of any large number of bottle-fed infants in one and the same ward appears to present difficulties which are directly proportional to the number of the inmates and indirectly to the number of nurses employed. Whether the infection is conveyed by direct means or is air-borne does not appear to be proven at the present time, but in either case the prophylactic measures described by Dr. Sherwood would meet the necessities of both cases, provided the technique is carefully observed. Good as are the mortality figures given by Dr. Sherwood as obtaining in this home, it is not justifiable to compare them with the general mortality-rate of the whole population without giving details as to the age of the infants and the number of breast-fed as compared with bottle-fed infants. Similar claims have been made with respect to results obtained in welfare centres, which are, as a rule, exempt from the unflattering mortality which occurs during the first few weeks of life and which, of course, greatly raises the general mortality rate. No doubt the prophylactic technique employed at the home in question is not unnecessarily elaborate in the case of institutional management, if it is to prove at all effective; but it is questionable whether it would prove practical or indeed necessary under ordinary domestic conditions in which the infant is more or less isolated and is only exposed to the risk of autogenous infection—if indeed this is so serious a risk as is implied in Dr. Sherwood's paper. We are not greatly impressed with the theory of the infective character of most cases of vomiting. This symptom is so essentially controllable by dietetic means, and so rarely occurs when the intervals between feeds are adequately prolonged, that we hesitate to believe, apart from its complicity with diarrhœa, that it is associated with an infective ætiology.

THE MYTH OF BACTERIAL LONGEVITY.

THERE is, perhaps, no well-established fact which the laity finds more difficult to grasp or to believe than that bacteria are present, sometimes in immense numbers, on every particle of material substance with which we come into direct contact. The failure to grasp this has sometimes a material consequence. How often have we not seen even trained persons sterilise an instrument and then undo their work by touching it with the unclean hand? The immaterial consequences which may flow from the inability to conceive how widespread is the distribution of bacteria are more difficult to define; the direction of a man's thought may be influenced by his proneness to accept as proved statements which the most elementary knowledge would show to be improbable. If an announcement were made in a reputable scientific journal that living spores had been found in an Egyptian mummy, and the conclusion drawn that the spores had lain dormant a couple of thousand years, we should be entitled to doubt the accuracy of the observation; we should remember that it is difficult to take a sample of any substance without introducing one or two extraneous organisms. The observation would have to be made repeatedly and by more than one competent technician before we should be expected to accept the statement. The difficulties of avoiding contaminations are ever present to the bacteriologist, and they breed a healthy scepticism of any "marvellous" results. The solution of problems of vital philosophical importance, as, for example, the question of the spontaneous generation of life, has depended upon

[1] Thèses de Paris, 1919-20, No. 31.

the satisfactory avoidance of accidental contaminations. We are led to make these rather platitudinous remarks after reading a leading article in the *Daily Telegraph* of April 13th, in which the "Immortality of Microbes" is discussed in an agreeably discursive way. A thin and tenuous web of fancy is spun round the reported discovery, to which our Paris correspondent also calls attention this week, by a French savant of living microbes in amber. It would be a breach of good manners, and would expose us to the horrid charge of lack of a sense of humour to subject such a pleasantly written essay to sober criticism. We content ourselves with expressing doubt as to the existence of these million year old microbes, and to pointing again to the possibility of contamination with organisms born but yesterday. The popular sense of wonder at the beauties (and the horrors) of nature demands satisfaction, sometimes in a grotesque and sometimes a refined and literary form which our newspapers supply. The solid satisfaction which comes from exact knowledge must be preceded by close and hard study, and is enjoyed by the few.

SCHOOL MEDICAL ADMINISTRATION IN SCOTLAND.

THE Scottish Board of Health has taken over the powers and duties of the Scottish Education Department in regard to the medical inspection and treatment of children. This fact was briefly recorded in THE LANCET of April 10th, and it may be well to consider further some of the important issues involved. In the first place, the actual carrying out of the inspection and treatment continues to devolve upon the local education authority whose duties are not altered in principle by the new relation established between the Board of Health and the Education Department. In its memorandum, which deals broadly with school administration in general, the Board of Health, however, urges close coöperation locally between the public health and education authorities. The latter are enjoined to appoint their school medical officer as administrative head of all services coming under the scope of school head administration, and this, if carried out, would be a great step forwards in unification. In the majority of Scottish areas the county medical officer is already school medical officer; it would be all to the good for the junior dual position to be held by the local medical practitioner, who is the one person trusted alike by parents and children. At the moment, possibly, he may not hold the diploma of public health which the Board of Health regards as indispensable, but it must be admitted that this diploma is now of little use to the school officer. It serves, however, as a proof that the holder's attention has been turned in a special manner to public health problems. In a decade or two the scope of the diploma will have been altered, and then the practitioner will be found glad to avail himself of the curriculum in public health. He will then learn the right way to control an epidemic of scarlet fever, of measles, or of diphtheria, and closure of schools for infectious disease will become as extinct as the dodo. He will learn how to diagnose and classify children according to their mental capacity, and he will gain facility in determining mental deficiency. In the meantime it is to be hoped that the Board of Health will not sacrifice its splendid ideal of administrative coöperation by urging local authorities to exclude the undiplomate practitioner.

As regards the school medical work, the Board of Health's memorandum lays stress on preventive work, suggesting three routine medical examinations for the child in the primary school, although the authority may, if it wishes, institute a greater number. Re-examination of defects, and examination of special cases presented by teachers, along with treatment and examination after treatment, will, in any case, keep the staff fully occupied. For the higher grade and secondary schools one examination at least is suggested, at or about 17 years of age, the period of adolescence when the child's metabolism is undergoing so radical a change. An examination made then may avoid the necessity for a change of career later. It is encouraging to note that the Scottish Board of Health frankly recognises the futility of laying down a uniform procedure for all education authorities. Scattered and sparsely attended schools in the Highlands and Islands cannot squeeze into the same mould as those in the densely populated districts of Renfrewshire, and much is left to local discretion; in the case of remote schools with an average attendance of under 30 pupils the obligation resting on the school doctor to pay two regular annual visits no longer holds.

Another point to which prominence is given in the memorandum is the following up of the work of the school doctor by the school nurse. The school nurse might be a much more effective factor in the service than she has hitherto been, whether in Scotland or England. This is to be done by combining in the person of the school nurse the functions of tuberculosis nurse and visitor, child welfare worker, and other duties of a similar kind. No one is better fitted than the right sort of district nurse for the particular area to coöperate with parents, children, and doctor in matters of personal and public health. When it comes to inspecting heads nurses might avoid odium by a temporary exchange of district. The Board desires each education authority to draw up its own scheme for medical inspection and treatment without delay, the memorandum serving to indicate the general lines to be followed, while still leaving scope for individual enterprise.

CREDÉ'S METHOD AND PUERPERAL SEPTICÆMIA.

SUGGESTIONS as to the Causes of the Persistence of Puerperal Septicæmia since the End of Pre-antiseptic Times is the title of an interesting paper by Dr. D. Berry Hart in the *Edinburgh Medical Journal* for April, 1920. The author states that now and for some time the mortality has not fallen in Great Britain and Ireland much below pre-antiseptic times as far as 1822. Two factors are given in the production of puerperal septicæmia—the first, imperfect asepsis and antisepsis; the second, defects in labour technique on the part of the obstetrician. The latter is specially discussed in this article. The method of expulsion of the fœtus is given, and the author shows that the "final passage of the head is in some respects disadvantageous and requires careful handling." Careful guarding of the perineum is necessary and in elderly primiparæ episiotomy is useful. The mechanism of the third stage of labour is then discussed, and the author's well-known views on this subject are given in detail. He regards the Credé practice as a great misfortune in the technique of the management of the third stage, the danger being that small

pieces of placenta and larger pieces of membrane may be left in utero, with septic infection following. The author imposes on himself an hour limit before interfering if hæmorrhage is not going on. Careful examination of the placenta and membranes is very important, and the writer recommends that a record should be kept of the state of all placentæ and membranes and of their relation to morbidity and mortality.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THE annual congress of this body, to be held from April 29th to May 1st at the House of the Royal Society of Medicine, promises to maintain a high standard of interest. The programme includes numerous papers, a clinical meeting, a visit to the special hospital of the Metropolitan Asylums Board for cases of ophthalmia neonatorum, with a discussion on the prevention and treatment of that disease, another discussion on Diabetes in Relation to Diseases of the Eye, and a dinner. Full details will be found in our Medical News column.

THE PHYSICAL SIGNS OF FOREIGN BODIES IN THE BRONCHI.

IN the *American Journal of the Medical Sciences* for March Professor Thomas McCrae, of Philadelphia, has published a careful study of the physical signs of foreign bodies in the bronchi in a considerable number of cases. The opportunity to examine the patients was given to him by his colleague, Professor Chevalier Jackson, a laryngologist, whose experience of foreign bodies in the air-passages is unrivalled. It might be supposed that a foreign body could not pass into a bronchus without producing symptoms which must be noticed. But this is not so. In one case an atomiser tip had been aspirated and the patient knew nothing of it. All that he could remember was that 18 months ago the tip had disappeared. He was thought to be suffering from tuberculosis. A boy of 8 was sent for some laryngeal condition and part of a collar button was found in a bronchus. No history of any acute onset could be obtained. Professor McCrae's impression is that such cases are by no means rare, and that foreign bodies in the bronchi are much more common than is generally supposed. The greatest difficulty of diagnosis arises when the body cannot be recognised by means of the X rays. These cases probably number from 10 to 15 per cent. of the total. There are two groups of unrecognised cases. In one the body sets up acute inflammatory changes which are soon fatal, and pneumonia is generally diagnosed. These cases particularly follow aspiration of some kind of nut by a young child. In the other group the symptoms become chronic, and pulmonary tuberculosis or bronchiectasis is diagnosed. In the physical signs there is great diversity. A closed safety-pin is not likely to cause much change in a short time, while a screw or tack, which plugs a bronchus, produces rapid changes. A body may plug a bronchus at one time and not at another, so that the signs vary. If this occurs at a short interval it is a striking point. Thus in one case the signs suggested collapse of the involved lobe and a few hours later it was apparently overdistended, which raised the idea of valvular action. The signs may be local or general; signs over both lungs are not uncommon, and they may be more diffuse on the unaffected side, which may lead to serious error. The only sign which was present in every case examined by Professor McCrae was decreased expansion on the affected side. It may be the only sign. In some cases râles, which may be termed characteristic, were heard over a small area. These may be described as very fine and softer than the early crackling râles of lobar pneumonia. They may be compared to the crackling of fine tissue paper. Pneumonia is often diagnosed, but a careful study of the signs should prevent this error. Fever is common after aspiration of a foreign body, and if there is dyspnœa with cough and bloody or blood-streaked sputum pneumonia is suggested. Decreased expansion and dullness may bear out this view, but a careful study of the vocal fremitus and the auscultatory signs should show that if there is pneumonia there is also plugging of the bronchus—a rare condition. In many cases no breath sounds or râles are heard over the affected parts; in others there may be râles but no breath sounds. Later, fibrosis, abscess, and bronchiectasis may be found. Professor Chevalier Jackson has called attention to a new sign of foreign body in the trachea or bronchi,[1] which he termed the "asthmatoid wheeze." It is heard with both inspiration or expiration, but sometimes only at the end of forced inspiration, on placing the ear or bell of the stethoscope over the patient's mouth. This sign is of considerable value, particularly when the foreign body does not show in the radiogram. Certain foreign bodies, particularly the peanut, set up very acute and dangerous changes in children. The clinical picture is rather distinctive and is one of œdematous, purulent tracheo-bronchitis, which often results in pulmonary abscess. The dyspnœa is extreme, cyanosis is usually marked, and there may be purulent tenacious sputum. The only distinctive signs which Professor McCrae finds of foreign body in the lung are "the asthmatoid wheeze" and the "tissue paper râles" heard over a small area.

THERE will be a meeting of the United Services Medical Society in the Library of the Royal Army Medical College, Grosvenor-road, S.W., at 3.30 P.M. on May 28th, to discuss the proposed amalgamation of the society with the War Section of the Royal Society of Medicine.

A MEETING of the Executive Council of the Federation of Medical and Allied Societies will be held at 11, Chandos-street, London, W.1, on Tuesday next, April 27th, at 4.30 P.M., when the special business to be considered includes the urgent need by legislation for the efficient treatment of mental disorders in their early stages (submitted by the Medico-Psychological Association), and the steps which should be taken to secure for the nursing profession representation on the Consultative Council of Medical and Allied Services of the Ministry of Health (submitted by the College of Nursing).

[1] THE LANCET, Dec. 14th, 1918, p. 824.

LONDON PANEL: POST-GRADUATE STUDY.—Beginning in May it is proposed to hold a course of lectures and demonstrations on laboratory methods in connexion with the prevention, diagnosis, and treatment of disease, which will be given by Dr. W. W. C. Topley, director of the pathological laboratories at Charing Cross Hospital on Thursdays at 9.30 P.M. The fee for the course will be £3 3s. and certificates of attendance are to be given. Other courses are being arranged for the near future.

THE

CHINA MEDICAL MISSIONARY ASSOCIATION CONFERENCE AT PEKING.

DURING the first week of March there was held at Peking a highly successful Conference of the China Medical Missionary Society and the National Medical Association—170 doctors of the former and 65 of the latter society taking part.

Problems of Mission Hospitals: Medical Education in China.

Dr. C. J. DAVENPORT, the President, of Shanghai, in the opening address, surveyed the outstanding work of the Conference since it last met. He referred to the leading features of medical work in China, to the greater spirit of coöperation that now prevailed, to the prominence of women in the medical work, and to the advance of medical education amongst the Chinese. He was followed by Dr. WU LIEN TÊH, President of the National Medical Association, a body of foreign-trained Chinese medical men, who stated that the desire of his society was to work at all times in coöperation with their foreign colleagues.

The Conference then dealt with various problems of mission hospitals in China, Dr. SNELL speaking of the city hospital, Dr. A. C. HUTCHESON on the up-country hospital, Dr. H. S. HOUGHTON on hospital accounts, and Dr. R. C. BEEBE on coöperative supply organisation. In the afternoon sectional meetings were held, the section of most general interest being that devoted to anatomy and anthropology. Dr. S. P. CHEN read a paper on the Attitude of the Chinese Government towards Dissection. It showed that the Home Office officials now recognised the necessity of practical anatomy for students, and were willing to authorise the supply of unclaimed bodies, but were hampered to some extent by popular feeling, which is still far from favourable in this respect.

Medical education occupied much attention, the necessity for approximating the standards of teaching and examination to those of Western countries being recognised, while the practical application of these ideals was seen to present formidable difficulties, especially in schools which teach in Chinese. Representatives of the Ministry of Education presented papers on the Government Medical Curriculum.

Dr. CHOU WEI-LIEN, Director of the Government Animal Experimental Station, read a paper on the Milk-producing Powers of Different Cattle, more especially of the Mongolian Cow, and gave statistics which showed the increasing demand for milk by the Chinese, who are not nationally a milk-drinking race.

The Work of the Sections.

In the General Medicine Section Dr. W. W. CADBURY gave a paper on the Treatment of Leprosy, describing the work he had done on the subject. Most of the speakers who followed him were rather pessimistic on the matter of any specific cure. Papers were also read by Dr. R. R. ROSS on Insanity among Chinese, and by Dr. J. KIRK on Tetanus Neonatorum.

In the General Surgery Section Dr. OSCAR THOMSON dealt with the subject of Vesical Calculus, based on 3000 cases operated upon in the Canton Hospital. Discussion centred chiefly round the ætiological factor and choice of operation. The paper read by Dr. J. A. B. BRANCH on the Treatment of Empyema by Dakin's Solution, based on the experience of 100 cases, showed how highly successful the results had been, but in the subsequent discussion the main difficulty to doctors in charge of "one-man-hospitals" was stated to be the exact preparation of Dakin's solution.

A good deal of the Conference's attention was devoted to public health problems. Dr. S. WOO dealt with the work of the last few years, showing the immense strides that had been made in the education of the public and giving some idea of the amount of literature which had been circulated in China. Dr. W. W. PETER also read a paper on this subject, and daily gave kinematographic displays of health subjects, including a very telling film of venereal disease and its ravages.

Methods of Anthropometry was the title of a paper given by Dr. A. HRDLICHA, who made an appeal for the collection and recording of the valuable information that anthropometrical records in China would yield. Demonstrations were given on preparations of mitochondria in the somatic cells of ascaris, by Dr. SHUNICHIONO, of Japan; on experimental alterations in the mitochondria of plant cells, by Dr. N. H. COWDRY; on the interstitial cells of Sebright testes, by Dr. ALICE BORING; and on schistosoma larvæ in men and other animals, by Dr. E. C. FAUST.

A most interesting paper was read by Dr. E. T. HSIEH, entitled "A Review of Chinese Anatomy from the Period of Huang-ti (Yellow Emperor, 2697 B.C.)." Numerous illustrations of the philosophical conception of human anatomy current throughout this long period were shown, and the speaker pointed out that little or no advance had been made in this science in China since the Ming Dynasty, for the reason that the accurate study of human material has at no subsequent date been possible.

DR. H. J. HOWARD read a paper on the Origin of the Vitreous Humor in the Human Eye. He discussed the various current theories as to the origin of the vitreous, in the light of his findings in an eye enucleated for suspected glioma. Evidence of the double origin of the vitreous from mesodermal and ciliary sources was presented. In the discussion which followed, the importance of early recognition of such cases was pointed out, also their bearing on the prognosis in the case of congenital cataract operations.

Professor M. INOUYE, of Tokio, gave a paper on the Muscles of the Soft Palate. His investigations were carried out by means of dissection, microscopic examinations and reconstruction, and experimental and clinical observations. A most interesting result has been obtained—viz., that the M. uvulæ is innervated, not from the pharyngeal plexus as described in current text-books, but by way of the palatine nerves, ciliary ganglion, and second division of the trigeminal nerve. The passage of motor fibres to this muscle, by way of the petrosal branch of the facial, was excluded, and movements of the palate were elicited by stimulation of the peripheral cut end of the trigeminal.

A somewhat remarkable feature of the Conference was the evidence given by young Chinese medical men of the way in which they are taking up and furthering the cause of scientific medicine. In fluent English demonstrations were given and papers read by Dr. HENG LIU on Blood Grouping and the Technique of Blood Transfusion; by Dr. T. M. LI on Practical Considerations in Eye Refraction; by Dr. WANG LING NEW on Treatment of Uterine Fibroids; and by Dr. HUA LIU on the Comparative Anatomy of the Mastoid Process.

Diseases and Epidemics Met With in China.

On the fourth day instructive papers were read dealing with the diseases and epidemics met with in China. Dr. J. W. CHUN and Dr. L. T. WU dealt with the management of the last cholera outbreak at Harbin, where the Chinese Anti-Plague Service had well-equipped laboratories and hospitals. In 1962 cases, by the systematic use of Roger's hypertonic saline infusions, the mortality was brought down to 14 per cent. Dr. BRAFLADT made an analysis of 100 cases of cholera seen at Tsinanfu and urged the extensive use of kaolin (bolus alba). He gave as much as 800–1200 g. daily to each patient and used infusions only for severe cases.

Dr. P. T. WATSON read an interesting paper on Bubonic Plague in Shansi, in which he doubted the essential factor of rat-fleas as a cause of plague. He thought that human fleas might transmit it direct from one person to another, and recommended a widespread prophylactic vaccination among the people, for which purpose the Manchurian Anti-plague Bureau might be invited to extend its activities to other parts of China. Papers were also read by Dr. VAN BUSKIRK (Seoul) on the Diet of Koreans and by Dr. S. D. WILSON on the Diet of Chinese. The former pointed out the low caloric value of Korean diet, which is mainly vegetarian—rice, barley, and beans are consumed, but fat and meat are rarely eaten, the result being a dilated

stomach and poor efficiency. The speaker referred to the greater vitality of white people, the result of their higher protein consumption. Dr. WILSON pointed out that ordinary bean curd, which is an important item of Chinese dietary and regarded as akin to cheese, has 86 per cent. water and 14 per cent. solids (which contain 21 per cent. fat, 60 per cent. protein, and 6 per cent. ash) as against our European cheese, which has 38 per cent. water and 62 per cent. solids. In many schools he found scarcely any protein or fat given, the diet consisting mainly of a little cabbage, white Chinese bread, white rice, and some salt and radishes.

At the next session Dr. WU LIEN TÊH gave an address on the Latest Phase of the Narcotic Problem, in which he showed figures representing the enormous increase of morphine injection in China, brought about by unscrupulous Japanese traders and British and American manufacturers. The amount had increased from 5½ tons in 1911, 14 tons in 1914, to nearly 28 tons in 1919. Both Edinburgh and London firms of high standing were implicated, as was proved by samples of covers which were shown. The Conference passed a resolution urging that immediate action should be taken for the better control of the production of opium and for the limitation of the manufacture of morphia and other derivatives to a quantity not exceeding that necessary for legitimate medical purposes.

The Rise of Scientific Medicine in China.

On the last day of the Conference the members with their wives attended a reception in the palace of President Hsu Shihchang. The President addressed them in a speech referring to the great humane work which they had done throughout China, and spoke with emphasis on the progress of Western medicine and the benefit it could bring to the people. This was followed in the evening by a banquet at the Army Medical College, where further complimentary speeches were made.

The Chinese Government has shown much appreciation of the work which is being done, and a new era has been entered in which scientific medicine and surgery are no longer regarded with suspicion and animosity. The founding of the China Medical Board (the Rockefeller Endowment), Hong-Kong University, Chinanfu, and other medical colleges, has brought about a real awakening. It is a movement which has come to stay, as evidenced by the numbers of Chinese students now entering the medical profession. This Biennial Conference has brought to notice the part being played all over China by medical missionaries, British and American, in the cause of medical education. It has also stimulated the delegates to further observation and research in a field which opens boundless opportunities for useful contributions to present-day medicine.

MEDICINE AND THE LAW.

Sentence on a Professional Abortionist.

AT the Central Criminal Court recently, Mr. Justice Shearman passed a sentence of ten years' penal servitude on Devi Dayal Sasun, L.R.C.P. Edin., 1902, a native of India, practising medicine in the East End, for manslaughter. The indictment was for the murder of a woman whose body was found in an archway at night near the prisoner's house. The case for the prosecution was that the woman had asked Sasun to procure her miscarriage, and that immediately after he had operated on her with that intent, had died from shock in his surgery. In order to conceal the crime he had carried the body to the place where it was found, and called the attention of the police to it, as though he had observed it casually in passing. The evidence of Dr. B. H. Spilsbury was to the effect that the woman died from the shock of the operation as stated above, and that though such an occurrence was rare, he had had experience of five similar cases. For the defence Dr. H. R. Andrews, Mr. Comyns Berkeley, and Dr. J. S. Fairbairn expressed opinions adverse to that of Dr. Spilsbury, to the effect that death from shock in such circumstances was so rare that it must be accounted as out of the question that it should have been caused by the operation in the case before the court.

More might have been heard of this view if the conviction had been one of murder and not of manslaughter. The latter verdict is not one strictly legal or logical, in that to cause death in the commission of a felony constitutes the crime not of manslaughter but of murder. It is, however, sometimes found, and it gave occasion for the police to go into the prisoner's record and antecedents, which were of such a character that the question whether in this particular instance his conviction was justified by the scientific evidence must to him, at any rate, have become unimportant. Not only was there another indictment on the file which was not gone into, but the police had found on Sasun's premises documents which showed, when followed up, that he had procured, or had attempted to procure, abortion in a number of women. It need only be pointed out that a single conviction in one of these cases would have rendered him liable to penal servitude for life, and, as a matter of fact, conviction in all of them, with cumulative sentences averaging ten years in each, would have involved condemnation to penal servitude for 1160 years!

A Remarkable Impostor.

At Liverpool Assizes recently Mr. Justice McCardie passed a richly deserved sentence of five years' penal servitude upon a man named Richard Thomas Cubbin, who for many years and in various places has preyed upon the public with singular effrontery and equally remarkable success. Cubbin was stated to have been the son of a collier and to have worked as such himself, losing a leg by an accident. Since 1895 he had lived much abroad and had practised as a medical man. He is a married man who, having deserted his wife, has gone through the ceremony of marriage with other women in order to rob them. In one instance he persuaded the widow of a medical man who had died at sea that he was her lost husband returned to her after three years' interval. His past sentences included one of penal servitude for bigamy and another for posing as a medical man and giving certificates of death. In the present instance the sentence was for forgery and giving death certificates, offences committed at Blackpool and Wigan. The epithet remarkable has been applied above to the success of this rascal's operations, because he was stated at his trial to have obtained posts as an assistant to medical men not only under an assumed name, Sir Alexander Thomas Munro, not in the Medical Register, but under the guise, unusual in such candidates, of a baronet, a "colonel-surgeon," a brigadier-general, and a K.B.E.; combinations of these titles appearing upon cards used by him. He even exhibited a coronet upon his stationery. This last peculiarity on the part of an alleged baronet may have helped to bring about Cubbin's undoing, but it is suggested that the other impostures, or any one of them, should have been enough. Medical directories, medical registers, army lists, and books of reference containing the names of baronets, with other particulars about them, are fairly accessible everywhere, and can be consulted without any possibility of hurting the feelings of a genuine candidate for a vacant post.

Witnesses Under Subpœna and Expert Evidence.

In an action tried recently in the High Court Mr. and Mrs. A. Leuw sued Mr. W. A. Bulleid for damages for an injury occasioned by the drill used by him in preparing one of her teeth coming in contact with the floor of her mouth. Severe hæmorrhage took place, and questions arose at the trial, not only with regard to the manner in which the accident was brought about, but also with regard to the subsequent treatment of the wound. In the end Mr. Justice Bailhache awarded damages to the plaintiff, with regard to the question of negligence, on the ground that either the defendant allowed the carborundum wheel to slip, in which case he would be liable, or that, assuming that the patient caused the accident by swallowing while the wheel was being used, the defendant ought to have warned her not to do so, or requested her to notify him before doing so

unless he could control her tongue in any case with the mirror. The accident, it may be observed, is one to which any dentist might at some time or other be liable, and the judge said expressly, in giving judgment, that although the evidence constrained him to find that there was "negligence," it implied nothing against the defendant's professional skill, or that there was more than a momentary lapse from caution on his part. Dr. Hugh Woods has since written, as secretary of the London and Counties Medical Protection Society, to point out, with justice, that extreme rarity in the occurrence of an accident is no proof that when it does occur it was the result of negligence.

A point of some interest with regard to medical witnesses was raised, however, in the course of the case by Sir Herbert Waterhouse, who was called on behalf of the plaintiffs, having been consulted by Mrs. Leuw four days after the accident took place. Sir Herbert Waterhouse explained to the judge that he had been summoned to give evidence under a subpœna, and submitted that in the circumstances he had the right to restrict his evidence to facts observed by him and to refuse to answer any questions intended to elicit from him an expert opinion as to the treatment of the plaintiff by the defendant. The judge expressed his appreciation of the point raised, but it is to be observed from the report of his evidence that Sir Herbert Waterhouse did, in fact, express certain opinions as to the probable nature of the wound and as to what was said to have been done to arrest the hæmorrhage. The question suggested would appear to be, "Can a witness, a medical man who has observed certain conditions in a patient and has been subpœnaed to attend at a trial and to give evidence with regard to them, be compelled further to express opinions as an expert upon matters not within his actual experience affecting his patient's condition?" In other words, in a case such as the one under discussion, having entered the witness-box in obedience to a subpœna, can he be obliged to criticise the treatment given by another practitioner? He might, no doubt, be very glad to refuse, and it would be convenient if it were recognised by the court that he was at liberty to do so. We doubt, however, whether the witness in the circumstances indicated can do more than Sir Herbert Waterhouse did—namely, protest, leaving the judge to make any comment that the occasion, in his lordship's opinion, may demand. We do not find any precedent for a witness on subpœna being regarded as distinct from other witnesses. The question whether a witness is one who can rightly be asked to express an opinion is always one for the judge. A witness in the position in which Sir Herbert Waterhouse was placed can explain, if he feels that he ought to do so, that he has not had such an opportunity to become acquainted with the facts as would qualify him to express an authoritative opinion upon them. The judge would, no doubt, give weight to an objection so raised; but we doubt if such a witness can have any right or privilege of refusing his evidence at his own option. It may, however, be pointed out that the occasion is not likely often to arise. With expert witnesses of other kinds it is likely to do so very seldom. With them and with medical men an obvious observation would apply. Expert witnesses are called to support the side which calls them, and are usually prepared to do so, having carefully studied the facts which others will prove. Counsel do not ask questions, particularly of their own witnesses, by whose answers they are bound, unless they are pretty sure of the nature of the answer that will follow. A prudent man, to use an advocate's phrase, does not fire off his gun unless he knows how it is loaded. Consequently, a medical practitioner who has kept strictly to himself his opinions on a given subject is not likely to be asked for them in the witness-box or to be pressed to give them if he shows himself reluctant in doing so. It must be remembered that we are here speaking of a witness who has attended unwillingly in obedience to a subpœna, and of his evidence in chief. In cross-examination he would be liable to be asked for opinions if it were believed that the replies would be favourable to the side putting the questions.

CONTROL OF VENEREAL DISEASE.

The Increase in Ophthalmia Neonatorum and its Significance.

THE significance of the increase in the notifications for ophthalmia neonatorum cannot be overlooked. In 1918 the total number of cases notified was 6532, in 1919 it was 8548. Taking the figures for successive quarters of the year 1919—namely, first quarter 1413, second 2036, third 2353, fourth 2746—we note a steady increase during the year. We may well ask whether maternal gonorrhœa has increased in this proportion. It would be enlightening to discover how many of these mothers were under treatment for gonorrhœa before the birth of their children and whether they were known to be infected or not. When these facts are known, it still remains to inquire if the simple precautions necessary to safeguard the infant's eyes at the time of birth were taken, and if not why not.

The Manchester Early Treatment Centre.

The report of Dr. W. A. Young, assistant M.O.H. for Manchester, on the result of the first three months' work of the Venereal Disease Early Treatment Centre for males in that city is of considerable interest. During that period 1016 attendances were registered, 708 persons received treatment and 117 were referred to different clinics in the city. At first, treatment was given to every individual who applied for it within two days after exposure to risk, but those applying late were warned that treatment could not be relied upon to prevent, after so long a period had elapsed. From Jan. 5th onwards no treatment was administered when more than 24 hours had elapsed from the risk of infection. Later it was laid down that no treatment would be given after an interval of 12 hours. One point already brought out is this: there seems no reason for believing that individuals have, to any marked extent, been instigated to take fresh risks, inasmuch as there have only been two instances of habitual frequenters of the centre. We hope that the Ministry of Health will consent to the request for this centre to continue its work, and will give the desired permission for another to be opened. The cost per head has worked out at 2*s.* 0½*d.* Truly this is a small sum when it is realised what the average patient suffering from venereal disease costs the community through loss of work, apart from maintenance in hospitals, asylums, or infirmaries. We reiterate our plea for the establishment of a similar experimental early treatment centre in London.

Report for 1919 on the Treatment of Venereal Diseases in Birmingham.

A report prepared by Dr. J. Robertson, M.O.H. for Birmingham, shows a considerable increase during the year 1919 in the number of venereal cases coming for treatment. It is difficult to say whether the maximum has now been reached, but there is some suggestion that it was reached during the third quarter. As regards gonorrhœa, there were during the year 1399 new male cases and 187 female cases, as compared with 685 and 118 during 1918. The total number of attendances were 11,925 for males and 1531 for females. For syphilis the new cases were 782 males and 459 females, as compared with 603 and 41 for 1918. The total attendances were 10,433 for males and 6881 for females; 8373 doses of salvarsan substitutes were given. The figures for gonorrhœa suggest that the number of cases coming for treatment are not as numerous as they should be, especially in the cases of females. An unsatisfactory feature is that nearly one-half the patients cease attendance before the completion of treatment. The present facilities provided are: (*a*) for males, five clinics weekly, staffed by nine medical officers at the General Hospital, and two evening clinics at the Skin and Urinary Hospital, staffed by two medical officers. In addition, attendances are made at other times for injections and irrigations. A whole-time orderly is present at each centre. (*b*) For females, the General Hospital provides three clinics weekly, staffed by two medical officers, the Skin and Urinary Hospital

provides one evening clinic, and the Women's Hospital one clinic. During the year 1300 enamelled iron notices have been fixed in factories and other places detailing the facilities offered. The total cost of the venereal diseases scheme during 1919, including the expenses of clinics, pathological laboratories, and publicity, amounted to £8573.

Continuous Mercurial Treatment.

The *Bulletin de la Société Française de Dermatologie et de Syphiligraphie*, No. 2 (1920), publishes a communication by Dr. Ch. Abadie on the Action of Uninterrupted and Prolonged Mercurial Injections in the Treatment of Certain Manifestations of Syphilis. Dr. Abadie recommends the employment of intravenous injections of cyanide of mercury in doses of a centigramme three times a week. He insists on the importance of continuing this treatment without interruption over a period of three to six months. Whatever may be the theoretical arguments in favour of allowing periods of rest, Dr. Abadie considers that in actual practice better results are obtained by carrying on continuous treatment. The cases under his care have been mainly cases of ocular syphilis, such as chorio-retinitis. In many apparently hopeless cases marked improvement resulted from the adoption of prolonged and uninterrupted treatment with cyanide of mercury. He recommends the employment of this method in other rebellious forms of syphilis, such as leucoplakia, cardiac syphilis, and the dystrophies and spastic paralysis of childhood.

Expert Examination in Law Suits.

In view of the greatly increased attention which is being devoted to the medical and sociological aspects of venereal disease it is reasonable to imagine that the question of infection will be much more prominently brought forward in the divorce and other courts than has hitherto been the case. This would be so even if legislation remained as it is at present, but, in view of the new legal measures which are sure to be brought into force by the pressure of public opinion, the definite diagnosis of venereal disease will become of even greater evidential value. We would here call attention to a position which, unless it is largely modified, will tend seriously to interfere with the course of justice. Imagine the case of a man or woman seeking judicial assistance, whether it be for divorce, separation, or other form of redress, on the plea that his or her partner is suffering from venereal disease. As matters are at present the defendant might bring evidence from two or three medical men to the effect that he or she had been examined by them and found to be free from the disease in question. The signatories to this evidence need not necessarily be venerologists, and even if they were there is no certitude that the examination upon which their evidence is based would necessarily be of the most searching nature. Owing, therefore, to inefficient examination a serious miscarriage of justice might ensue. We hold that in the interest of the community the court should be able to order all such cases to be examined by a venerologist selected for the purpose. Should the present arrangement continue the ends of justice will necessarily be frustrated.

Royal Free Hospital Post-graduate Course.

A course has been arranged by the London (Royal Free Hospital) School of Medicine for Women, the Royal Free Hospital, the Elizabeth Garrett Anderson Hospital, and the London Lock Hospital for the instruction of qualified medical women in the treatment of venereal diseases. The course will begin on Monday, May 17th, at 5 P.M., and conclude on Saturday, May 29th. The course will include out-patient clinics for women and children by Dr. Margaret Rorke, Dr. Naomi Tribe, Mr. J. E. Lane, and Mr. J. J. Abraham; demonstrations by Mr. Charles Gibbs and Dr. Elizabeth Lepper; visits to maternity wards and labour department under Dr. Morna Rawlins; and lectures by Mr. Lane and Mr. J. E. R. McDonagh. Qualified medical women should send in their names to Miss Louie M. Brooks, warden and secretary of the Medical School. Fee for the whole course, £5 5*s*. The library, refectory, and common rooms at the Medical School are available for use by the post-graduate students attending the course. The course will be repeated during the second fortnight of September.

"How Not to Do It."

In a pamphlet on "Venereal Diseases and their Treatment—How Not to Do It," just issued by the National Association of Medical Herbalists of Great Britain, an outline is given of the "orthodox treatment of venereal diseases," which is stated to nullify "the claim of the regular profession to any special knowledge of their origin and nature, or to any infallible remedy for their cure." The conclusion is drawn that "the Government are not justified in subsidising the arsenical and mercurial remedies which are favoured for the time being by the regular profession, and still less are they justified in seeking to suppress all unorthodox methods of treatment."

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

General Nursing Council for Scotland.

THE appointment of the members of the General Nursing Council for Scotland, established by the Nurses Registration (Scotland) Act, 1919, has now been completed. The general composition of this Council was described in your issue of Jan. 24th (p. 226). The following is a list of the members of the Council:—

Appointed by the Privy Council: Captain Charles B. Balfour, C.B., Lord Lieutenant of the County of Berwick.

Appointed by the Scottish Education Department: Miss Norah Milnes, B.Sc., Director of the School of Social Study and Training, Edinburgh University.

Appointed by the Scottish Board of Health: Dr. A. K. Chalmers, Medical Officer of Health, Glasgow; Dr. Katherine Clark, Assistant Medical Officer to the Edinburgh Education Authority; Dr. H. E. Fraser, Medical Superintendent, Royal Infirmary, Dundee; Colonel D. J. Mackintosh, C.B., M.V.O., Superintendent, Western Infirmary, Glasgow; Miss Margaret Bell, Queen's Nurse, Musselburgh; Miss Kathleen L. Burleigh, Matron, Royal Hospital for Sick Children, Edinburgh; Miss Annie Gill, R.R.C., Lady Superintendent of Nurses, Royal Infirmary, Edinburgh; Miss Mary Hunter, Public Health Department, Glasgow; Miss Elizabeth T. Jones, School Nurse, Edinburgh Education Authority; Miss Janet Melrose, R.R.C., Matron, Royal Infirmary, Glasgow; Miss Florence A. Merchant, Matron, Stobhill Hospital, Glasgow; Mr. T. Prentice, Mental Hospital, Hartwood, Lanarkshire; Miss Margaret R. Stewart, Secretary and Treasurer, Scottish Nurses' Club.

Arrangements will be made by the Scottish Board of Health for convening the first meeting of the Council at an early date.

University of Glasgow: Faulds Fellowships.

Under the bequest of the late William Brechin Faulds, writer in Glasgow, four Faulds Fellowships have been instituted in the Faculties of Arts, Medicine, Divinity, and Law respectively. Each Fellowship is tenable for three years, subject to the fulfilment of the prescribed conditions. The stipend of each Fellow in any year will be one-fourth of the net annual income of the trust fund for the preceding year, and the Fellowship will be awarded by the Senatus, on the recommendation of the Faculty concerned, and will not be tenable along with any other graduate Fellowship or Scholarship. Candidates in Medicine must be men who have within the three academical years immediately preceding the award completed the medical curriculum by passing the Final Professional Examination required for graduation, and taken the degrees of M.B., Ch.B. The applications of candidates in each Faculty will be considered by that Faculty, who will take into account the candidates' general academic record, the evidence of their capacity for advanced study, inquiry, or research, and the results of any independent work, published or unpublished, which they may have undertaken, arranging for such trial and oral or practical examination as may be deemed necessary for their decision. During the tenure of his Fellowship the Fellow must devote himself to some branch of advanced study, inquiry, or research recommended by his Faculty and approved by the

Senatus, and arrangements are provided for report to the Faculty on his progress.

The Glasgow Post-graduate Medical Association.

At a recent joint meeting of the Faculty of Medicine of the University of Glasgow and the General Committee for Post-graduate Teaching, a comprehensive scheme for permanent post-graduate medical teaching in Glasgow was adopted. The joint committee recommend the formation of a central organisation, to be known as the Glasgow Post-graduate Medical Association, for arranging, coördinating, and administering the teaching in Glasgow and the West of Scotland. The Board of the Association is to consist of representatives of those teaching institutions which grant facilities for post-graduate teaching, and of the teachers themselves. The joint committee also issue certain suggestions for the organisation of the courses. These are to include "refresher" courses of four to six weeks' duration for the general practitioner, to be held twice a year; weekly demonstrations for the benefit of local practitioners; and advanced and comprehensive full-time courses of six months' duration, leading to a diploma, on subjects such as obstetrics and child welfare, school medical inspection, hygiene, tuberculosis, and venereal diseases. It is emphasised that the future development of the scheme depends largely on financial considerations and the possibility of obtaining some assistance from the Government.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Hunger Strike in Mountjoy Prison.

THE hunger strike of some 89 prisoners in Mountjoy Prison, Dublin, last week, in order to obtain recognition of status as political prisoners, placed the medical officers of the prison in as difficult a position as any in which a medical man can find himself. To have the care of so many men gradually losing their hold on life and to be able to do next to nothing to prevent it—for forcible feeding is no longer permitted—is very trying for a humane member of our profession. The final decision of the Government to release any prisoners who, in the opinion of the medical officers of the prison, were in danger of death, came in time to prevent any calamity. It is not surprising to learn that prior to this one medical officer felt himself compelled to resign his post, and the health of the other was so injured by the strain that he was subsequently rendered unfit for duty. The humanity of the medical officers was recognised by the friends of the prisoners, many of whom mentioned it specially in conversations which have since been published.

Ulster Medical Society.

At the ninth meeting of session 1919–20 of the Ulster Medical Society, held on April 16th in the Belfast Medical Institute, Mr. A. Fullerton being in the chair, Dr. H. F. Lechmere Taylor (Edinburgh) and Dr. E. Montgomery (Belfast) gave an account of medical work in India. The main features in connexion with the hospital which they described were the infrequency of appendicitis and malignant disease, as well as of abdominal tumours; and the frequency of stone, malaria, and cataract.

The Water-supply of Belfast.

The water in store on April 8th was (as reported at the fortnightly meeting of the Belfast Water Commissioners held on April 16th) 2770 million gallons, while on the same date in 1919 it was 2787 million gallons. The estimated population at present being supplied was 443,492, and the daily consumption averaged 17,610,000 gallons, which equalled 39·69 gallons per head of the population, a larger amount than formerly—that is, since the war. The matter is one, of course, of urgent medical interest to us in Belfast.

The Queen's University of Belfast.

At a meeting of the Senate of the Queen's University of Belfast held on April 15th it was announced that Mr. F. A. Heron, of Maryfield, near Belfast, proposes to give the University a gift of £5000, to be applied exclusively for the teaching of physical chemistry. The Vice-Chancellor having spoken of the great need of further equipment in the faculties of medicine and science, Lady Pirrie, in supporting him, said the Royal Victoria Hospital and the University were complementary to each other in their work, and she hoped the Vice-Chancellor would assist in getting further subscriptions for the hospital to meet its ever-increasing needs.

Poor-law Doctors' Salaries.

On April 17th a joint application was presented to the Omagh board of guardians for an increase of salary on the part of the medical Poor-law officers of Cavan, Donegal, Fermanagh, Monaghan, and Tyrone. The application urged that the salaries of dispensary doctors should be fixed at £300 per annum, rising annually by £5 to £400, with £50 yearly as medical officer of health; that the salaries of workhouse medical officers should be £200 yearly, rising annually by £5 to reach £300; that locum-tenents be appointed at £7 7*s.* weekly for dispensary districts, and £5 5*s.* for workhouse hospitals, or, where both duties are combined, that the payment should be £10 10*s.* a week; and that one month's leave be granted to medical officers annually. There was prolonged silence, I understand, after the above application was read, a member of the Omagh board of guardians remarking "that it had struck the members speechless." The board adjourned the question indefinitely, a member stating that the farmers would be bankrupt "if this goes on." It is generally believed that no people in Ireland have, since the beginning of the war, done better than the farmers.

April 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

New Regulations for the Sale of Poisons.

THE increase in drug-taking and the abuse of hypnotics have led to more stringent laws controlling the sale of these substances. The law of July 12th, 1916, and the decree of Sept. 14th, 1916, have forbidden the chemist to sell to the same person a quantity to last more than seven days of any poisonous substance named on the official list. After this time the patient has to present a new prescription. The chemist who renews an old prescription lays himself open to a fine of 1000 to 10,000 francs, to a term of imprisonment from three months to two years, and to the erasion of his name from the register. Also, prescriptions ordering quantities of poisons for more than 20 days of treatment have to be refused. These rules are obviously inspired by the desire to combat the illicit traffic in opium, morphia, and cocaine, but they are also applicable to other poisons on the official list, including, for example, mercurial salts. Now these are used for prolonged treatment in cases where it is impossible to ask the patient to return every week to his doctor or hospital for a new prescription. Such cases include women who have been ordered perchloride douches for vaginal discharges, and syphilitics who are being treated by mercury in the form of pills, taken twice daily in series of 40, with monthly and later two-monthly remissions, for three or four years. This method of treatment still has many adherents among those suspicious of the uncertain action of arsenobenzol and of the special conditions of its administration. The Société Médicale de l'Est, following a most careful report by M. Perrin, points out that the difficulties thus introduced by the law will encourage still further the tendency of the syphilitic to neglect his treatment, and will hinder the fight against venereal diseases. This society has decided to press for the modification of the law on this point.

The Effects of the Paper Crisis.

The paper crisis may lead to the suspension of the medical periodicals, already sorely tried by the printers' strike last month. The difficulty cannot be overcome

by raising the price to subscribers and the tariff of advertisements. Scarcity and high price of paper are also impeding the publication of books, and in this way menacing scientific progress. Among the remedies proposed one is the suppression of the thesis required for obtaining the degree of doctor of medicine. This formality dates back four centuries at least. At first the thesis was only a big sheet of paper surrounded by symbolic engravings, on which a candidate had printed the various propositions he wished to submit to his judges. Little by little the thesis became a scientific memorandum on a subject chosen by the candidate and on which he was prepared to defend his conclusions. The number of copies that had to be furnished steadily rose. Every university library in France required one to enrich its collection, and foreign universities followed offering theses of their own in exchange. The hundred copies of the theses now obligatory, at the present cost of paper and printing, makes a heavy tax on the resources of the young student. It is proposed, therefore, to suppress this formality. Those in favour of abolition point out that the majority of theses are valueless compilations made with the help of fellow-students. A candidate who has the money may even buy a ready-made thesis from some impecunious but better-informed comrade. The few communications of real value might be brought to notice at learned societies or by publication in the journals. Instead of the prizes given every year for the best theses, consisting in medals and possibly the remission of some of the high examination fees, it is suggested that the same result could be obtained by offering a substantial reward for valuable articles published, a procedure which would also ensure the interests of scientific progress. For the immense majority of candidates who have no ambition beyond becoming general practitioners the heavy pecuniary burden of the thesis has no compensation, while their diligent but mediocre screeds encumber the shelves of the professors who are entitled to receive reprints—until they are sold by the housekeepers as waste-paper. Besides this there are the essays puffing proprietary articles of which the manufacturer pays the cost of production, or those by which the young doctor seeks to establish himself in practice. The time is opportune to make a clean sweep of this mediæval custom.

Living Micro-Organisms in Papyrus and Amber.

In a recent remarkable communication to the Academy of Medicine, Dr. Galippe announced his discovery in an Egyptian papyrus of microscopical organisms capable of motion and reproduction. These microbes were contained in the very fibres of vegetable matter which served in the manufacture of the papyrus. More recent researches by the same observer carry us back still further. This time the centre of interest is the fossil resin, popularly known as amber, to be found thinly distributed in cretaceous strata. The period of its formation is so remote that competent geologists hesitate to give a precise date even in millennia. But in spite of this, the resin was found to contain living atoms contemporaneous with its formation. By special processes Dr. Galippe convinced himself of his ability to reawaken them, like the sleeping princess of the fairy story, from their long slumber. They then showed active movements and power to reproduce themselves. This quasi-indestructibility of the infinitely small, its resistance to the action of time and of physical and chemical agents, is a biological property of fascinating interest—but its existence is challenged.

April 19th.

THE NURSES' COÖPERATION.—**This organisation,** which has for its main object the securing of full remuneration to nurses for their work, shows by its annual report for 1919 a successful year of operation. The fees received by the nurses have exceeded those earned in any previous year—namely, £61,059, or £3774 more than last year. Beginning in 1891 with a staff of 30 nurses, the coöperation has now 442 fully trained nurses on the general staff and 36 asylum-trained nurses for mental patients. The total number of cases nursed in 1919 was 6169, or 114 more than in the previous year. The address of the coöperation is 22, Langham-street, Portland-place, London.

URBAN VITAL STATISTICS.

(Week ended April 17th, 1920.)

English and Welsh Towns.—In the 96 English and Welsh towns, with an aggregate civil population estimated at nearly 18 million persons, the annual rate of mortality, which had been 18·7, 16·7, and 16·6 in the three preceding weeks, further declined to 15·8 per 1000. In London, with a population of nearly 4½ million persons, the annual death-rate was 16·1, or 1·5 per 1000 below that recorded in the previous week, while among the remaining towns the rates ranged from 5·4 in Enfield, 7·2 in Oxford, and 8·0 in Reading, to 25·2 in Blackburn, 26·5 in Sunderland, and 32·4 in Tynemouth. The principal epidemic diseases caused 411 deaths, which corresponded to an annual rate of 1·2 per 1000, and included 185 from measles, 102 from whooping-cough, 53 from infantile diarrhœa, 51 from diphtheria, 15 from scarlet fever, 3 from enteric fever, and 2 from small-pox. Measles caused a death-rate of 2·0 in Bootle, 2·1 in Wakefield, 2·4 in Brighton, and 4·8 in Newport (Mon.). The fatal cases of small-pox belonged to West Ham and Liverpool respectively. The deaths from influenza, which had been 392, 379, and 332 in the three preceding weeks, further declined to 306, and included 101 in London, 22 in Birmingham, 12 each in Manchester and West Ham, and 10 in Blackburn. There were 1960 cases of diphtheria, 1902 of scarlet fever, and 24 of small-pox under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, against 1995, 2011, and 26 respectively at the end of the previous week. The causes of 42 of the 5379 deaths in the 96 towns were uncertified, of which 6 were registered in Birmingham, 5 in Liverpool, and 4 each in St. Helens and Manchester.

Scotch Towns.—In the 16 largest Scotch towns, with an aggregate population estimated at nearly 2½ million persons, the annual rate of mortality, which had been 18·0, 17·2, and 17·3 in the three preceding weeks, rose to 18·9 per 1000. The 414 deaths in Glasgow corresponded to an annual rate of 19·4 per 1000, and included 29 from influenza, 25 from measles, 5 from diphtheria, 2 each from enteric fever, scarlet fever, and whooping-cough, and 1 from infantile diarrhœa. The 108 deaths in Edinburgh were equal to a rate of 16·5 per 1000, and included 8 from influenza and 1 each from measles and diphtheria.

Irish Towns.—The 251 deaths in Dublin corresponded to an annual rate of 31·5, or 4·7 per 1000 above that recorded in the previous week, and included 16 from whooping-cough, 15 from measles, 5 from influenza, 2 from infantile diarrhœa, and 1 each from scarlet fever and diphtheria. The 229 deaths in Belfast were equal to a rate of 28·9 per 1000, and included 17 from influenza, 6 from whooping-cough, 5 from measles, 2 from infantile diarrhœa, and 1 from scarlet fever.

VITAL STATISTICS OF LONDON DURING MARCH, 1920.

IN the accompanying table will be found summarised statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious disease, it appears that the number of persons reported to be suffering from one or other of the ten diseases notified in the table was equal to an annual rate of 7·1 per 1000 of the population, estimated at 4,358,309 persons; in the three preceding months the rates had been 9·9, 8·5, and 7·7 per 1000. Among the metropolitan boroughs the lowest rates from these diseases were recorded in Hammersmith, the City of Westminster, St. Marylebone, Hampstead, Islington, Stepney, and Bermondsey; and the highest in Fulham, Finsbury, Bethnal Green, Battersea, Deptford, and Lewisham. Eleven cases of small-pox were notified during the five weeks ended April 3rd; of these, 8 belonged to Poplar, 2 to Stepney, and 1 to Woolwich. The prevalence of scarlet fever was 12 per cent. less than in February; this disease was proportionally most prevalent in Chelsea, Holborn, Finsbury, Bethnal Green, Poplar, Deptford, and Lewisham. The Metropolitan Asylums Hospitals contained 1981 scarlet fever patients at the end of the month, against 2841, 2476, and 2266 at the end of the three preceding months; the weekly admissions averaged 240, against 350, 280, and 279 in the three preceding months. Diphtheria was slightly less prevalent than in the preceding month; this disease was proportionally most prevalent in Fulham, St. Pancras, Hackney, the City of London, Shoreditch, Bethnal Green, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals, which had been 1845, 1971, and 2003 at the end of the three preceding months, numbered 1964 at the end of March; the weekly admissions averaged 260, against 239, 263, and 240 in the three preceding months. The prevalence of enteric fever was about equal to that in the two preceding months; of the 59 cases notified during the month 7 belonged to Fulham, 7 to St. Marylebone, 7 to Hampstead, 5 to Deptford, 4 to Paddington, 4 to

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1920.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated civil population, 1919.	Notified Cases of Infectious Disease.												Deaths from Principal Infectious Diseases.								Deaths from all causes.	Death-rate per 1000 living.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual ratio per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual ratio per 1000 persons living.		
LONDON	4,358,309	11	1285	1307	—	59	2	45	254	22	2	2987	7·1	2	295	24	137	181	3	74	716	1·7	7350	17·6
West Districts:																								
Paddington	143,938	—	28	55	—	4	—	2	13	—	—	102	7·4	—	2	1	1	1	—	5	10	0·7	201	14·6
Kensington	157,886	—	46	48	—	4	—	1	9	—	—	108	7·1	—	2	1	3	2	1	4	13	0·9	239	15·8
Hammersmith	130,981	—	13	30	—	—	—	3	3	—	1	50	4·0	—	3	—	3	4	—	—	10	0·8	185	14·7
Fulham	152,543	—	47	74	—	7	—	5	13	—	—	146	10·0	—	7	—	6	4	1	1	19	1·3	213	14·6
Chelsea	60,573	—	26	5	—	2	1	2	2	1	—	39	6·7	—	1	—	2	—	—	1	4	0·7	96	16·5
City of Westminst'r	127,533	—	35	17	—	2	—	—	7	—	—	61	5·0	—	3	—	1	1	1	—	6	0·5	208	17·0
North Districts:																								
St. Marylebone	97,953	—	34	8	—	7	—	—	6	1	—	56	6·0	—	1	—	—	4	—	4	9	1·0	157	16·7
Hampstead	88,012	—	11	16	—	7	—	—	1	—	—	35	4·1	—	1	1	—	1	—	—	3	0·4	107	12·7
St. Pancras	219,434	—	59	69	—	1	—	2	15	—	—	146	6·9	—	16	1	3	21	—	5	46	2·2	378	18·0
Islington	323,034	—	73	83	—	2	—	3	20	3	—	184	5·9	—	36	1	11	20	—	1	69	2·2	601	19·4
Stoke Newington	50,954	—	9	18	—	—	—	—	5	—	—	32	6·5	—	3	—	2	5	—	—	10	2·0	97	19·9
Hackney	216,736	—	42	87	—	—	—	5	12	4	—	150	7·2	—	32	1	14	16	—	1	64	3·1	451	21·7
Central Districts:																								
Holborn	38,156	—	17	7	—	1	—	—	2	—	—	27	7·4	—	2	—	1	—	—	—	3	0·8	67	18·3
Finsbury	75,291	—	30	18	—	—	—	—	18	—	—	66	9·1	—	3	—	6	2	—	—	11	1·5	148	20·5
City of London	13,893	—	1	7	—	—	—	—	1	—	—	9	6·8	—	—	—	—	—	—	—	—	—	23	17·3
East Districts:																								
Shoreditch	98,134	—	27	39	—	—	—	2	6	—	—	74	7·9	—	8	2	4	3	—	6	23	2·4	201	21·4
Bethnal Green	110,085	—	52	54	—	—	—	—	4	—	—	110	10·4	—	24	2	5	18	—	7	56	5·3	271	25·7
Stepney	232,506	2	58	59	—	2	—	2	10	1	—	134	6·0	—	14	2	6	16	—	2	40	1·8	521	23·4
Poplar	153,644	8	61	34	—	—	—	2	7	1	—	113	7·7	2	12	—	6	15	—	1	36	2·4	337	22·9
South Districts:																								
Southwark	179,971	—	42	53	—	2	—	3	17	1	—	118	6·8	—	21	—	9	4	—	2	36	2·1	346	20·0
Bermondsey	124,239	—	26	10	—	—	—	—	2	—	—	38	3·2	—	17	2	1	6	—	3	29	2·4	247	20·7
Lambeth	282,322	—	101	70	—	2	—	2	16	1	—	192	7·1	—	20	2	13	9	—	8	52	1·9	511	18·9
Battersea	159,316	—	59	54	—	4	—	3	12	2	1	135	8·8	—	3	1	7	7	—	2	20	1·3	253	16·6
Wandsworth	333,693	—	128	110	—	3	—	4	17	3	—	265	8·3	—	20	1	7	2	—	4	34	1·1	393	12·3
Camberwell	273,802	—	59	105	—	2	1	3	12	1	—	183	7·0	—	21	3	10	6	—	9	49	1·9	393	15·0
Deptford	111,205	—	53	24	—	5	—	1	7	—	—	90	8·4	—	4	—	4	3	—	5	16	1·5	163	15·3
Greenwich	98,484	—	37	32	—	1	—	—	6	—	—	76	8·0	—	8	1	2	7	—	1	19	2·0	166	17·6
Lewisham	167,754	—	74	57	—	1	—	—	7	2	—	141	8·8	—	3	1	6	3	—	1	14	0·9	206	12·8
Woolwich	136,237	1	37	64	—	—	—	—	4	1	—	107	8·2	—	8	1	4	1	—	1	15	1·1	171	13·1
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

Kensington, and 4 to Battersea. There were 38 cases of enteric fever under treatment in the metropolitan asylums at the end of the month, against 25, 25, and 30 at the end of the three preceding months; the weekly admissions averaged 6, against 2, 4, and 6 in the three preceding months. Erysipelas was proportionally most prevalent in Paddington, Fulham, Stoke Newington, Finsbury, Southwark, and Battersea. The 45 cases of puerperal fever included 5 in Fulham, 5 in Hackney, 4 in Wandsworth, and 3 each in Hammersmith, Islington, Southwark, Battersea, and Camberwell. The 22 cases of cerebro-spinal meningitis included 4 in Hackney, 3 in Islington, 3 in Wandsworth, 2 in Battersea, and 2 in Lewisham; while the 2 cases of polio-myelitis belonged respectively to Hammersmith and Battersea.

The mortality statistics in the table relate to the deaths of civilians actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ended April 3rd the deaths of 7350 London residents were registered, equal to an annual rate of 17·6 per 1000; in the three preceding months the rates had been 13·1, 14·6, and 16·6 per 1000. The death-rates ranged last month from 12·3 in Wandsworth, 12·7 in Hampstead, 12·8 in Lewisham, 13·1 in Woolwich, 14·6 in Paddington, 14·6 in Fulham, and 14·7 in Hammersmith, to 20·5 in Finsbury, 20·7 in Bermondsey, 21·4 in Shoreditch, 21·7 in Hackney, 22·9 in Poplar, 23·4 in Stepney, and 25·7 in Bethnal Green. The 7350 deaths from all causes included 716, which were referred to the principal infectious diseases; of these, 2 resulted from small-pox, 295 from measles, 24 from scarlet fever, 137 from diphtheria, 181 from whooping-cough, 3 from enteric fever, and 74 from diarrhœa and enteritis among children under 2 years of age. No death from any of these diseases was recorded last month in the City of London. Among the metropolitan boroughs the lowest death-rates from these diseases were recorded in Paddington, Hammersmith, Chelsea, the City of Westminster, Hampstead, and Holborn; and the highest in Hackney, Shoreditch, Bethnal Green, Poplar, and Bermondsey. The 2 fatal cases of small-pox belonged to Poplar. The 295 deaths from measles were 9 fewer than the average number in the corresponding period of the five preceding years; this disease was proportionally most fatal in Islington, Hackney, Bethnal Green, Southwark, and Bermondsey. The 24 fatal cases of scarlet fever exceeded the average by 6, and included 3 in Camberwell and 2 each in Shoreditch, Bethnal Green, Stepney, Bermondsey, and Lambeth. The 137 deaths from diphtheria were nearly double the average; the greatest proportional mortality from this disease occurred in Hackney, Finsbury, Bethnal Green, Southwark, Lambeth, and Battersea. The 181 fatal cases of whooping-cough were 22 in excess of the average; this disease was proportionally most fatal in St. Pancras, Stoke Newington, Hackney, Bethnal Green, Stepney, Poplar, and Greenwich. Three deaths from enteric fever were registered during the month, against an average of 8; these deaths belonged respectively to Kensington, Fulham, and the City of Westminster. The 74 fatal cases of infantile diarrhœa were 3 below the average; the greatest proportional mortality from this disease occurred in Paddington, St. Marylebone, Shoreditch, Bethnal Green, Camberwell, and Deptford. In conclusion, it may be stated that the aggregate mortality in London during March from these principal infectious diseases was 12 per cent. above the average in the corresponding period of the five preceding years.

DINNER OF THE HARROGATE MEDICAL SOCIETY.—The annual dinner of the Harrogate Medical Society, the first held since the war, took place at the Prospect Hotel, Harrogate, on April 15th, about 70 medical men being present. Dr. W. Bertram Watson, President of the Society, was in the chair, and the guests included Sir Berkeley Moynihan, Dr. Bedford Pierce (President of the British Medico-Psychological Association), Dr. W. H. Willcox, and the Mayor of Harrogate (Alderman J. Shepherd). Sir Berkeley Moynihan referred to the proposed Institute for Investigation, somewhat on the lines of Duff House, where patients exhibiting early errors of metabolism would find at their disposal the best available pathologist, radiographer, and biochemist. He hoped the scheme would shortly materialise, since team-work was essential to-day, and Harrogate was extraordinarily fortunate in opportunities for research. The President briefly replied, and speeches by Mr. Herbert Frankling, Dr. Pierce, Dr. Willcox, and Dr. David Brown concluded a pleasant evening.

Correspondence.

"Audi alteram partem."

TREATMENT OF BILHARZIA DISEASE.

To the Editor of THE LANCET.

SIR,—May I add one or two remarks to the admirable annotation in your issue of April 17th of Dr. F. G. Cawston's paper on the treatment of 30 cases of bilharzia disease with tartar emetic. Dr. Cawston records two cases in which cough followed the injection of the drug, and although he does not expressly say so I gather that he regarded this phenomenon as an unusual one. In my experience the occurrence of a short bout of coughing coming on towards the completion of the injection is an almost invariable phenomenon. In Dr. Cawston's Case 5 he seems to suggest that the antimony injections were the cause of a chronic cough persisting for a fortnight and aggravated by each injection. I can hardly think the persistence of the cough can be ascribed to the antimony, and it would have been extremely interesting if Dr. Cawston had recorded the results of a careful examination of the chest during this period.

With regard to a rise of temperature, with possibly a rigor as a result of tartar emetic injections, my experience coincides with Dr. Cawston's in regarding such occurrences as rare in the treatment of bilharzia disease. In trypanosomiasis, however, marked rise of temperature, together with rigor, is frequently noted as a result of injections of tartar emetic. This I regard, however, as due to a massive trypanolysis, rather than to the action of the drug, as later in the course of the disease, when parasites have become extremely scanty as a result of treatment, rigors or any marked rise of temperature are unusual.

In cases treated by intravenous injections of tartar emetic a marked rise of temperature and rigor may occasionally occur in a patient who has never exhibited this reaction in possibly numerous previous injections. Such a result, as you rightly point out, may be due to some impurity in the distilled water used for the injection. In my experience, where the freshness and purity of the distilled water could be guaranteed, a violent reaction might occasionally occur, and seemed to me to be due to the temperature of the injected solution being introduced at a temperature below blood heat. At any rate, that was the only cause I could assign, and after this was attended to such untoward and unusual effects were eliminated. I may say I always make a practice of administering the dose of tartar emetic in high dilution—i.e., in some four to six ounces of fluid.—I am, Sir, yours faithfully,

H. B. NEWHAM.

London School of Tropical Medicine, Endsleigh-gardens, N.W., April 18th, 1920.

WAR ŒDEMA AND EPIDEMIC DROPSY.

To the Editor of THE LANCET.

SIR,—It will be a pity if, as the outcome of Dr. A. D. Bigland's excellent article on Œdema as a Symptom in So-called Food-Deficiency Diseases in THE LANCET of Jan. 31st, a confusion should arise between famine dropsy and epidemic dropsy. The disease called by Macleod epidemic dropsy, with its itching, burning, and erythema or urticaria which preceded or accompanied the anasarca, was probably ankylostomiasis. This outbreak in Mauritius, described by Macleod, Davidson, and Chevers, and referred to later in Manson's and Daniels's works on tropical diseases, does not bear any real epidemiological resemblance to the famine dropsy so clearly differentiated by Cornish and Porter in the Indian famine of 1877–78. Giles, in his "Report on the Causes of the Diseases Known in Assam as Kala-azar and Beri-beri" (1890), showed these diseases, and, I think, Macleod's "epidemic dropsy," to be ankylostomiasis. Macleod himself directs attention to the relationship between the Mauritius and the Assam cases, and states definitely that "this dropsical disease was by no means confined to the impoverished and sickly." Simultaneously, however, in the Madras famine Cornish and Porter observed and first described clearly "famine dropsy" which, during the war, has been rediscovered under a variety of terms, including "war œdema" and "hunger œdema." Cornish had recognised the disease even earlier, in 1864, when he discussed prison dietaries and diseases. Cornish's references are as follow:—

1. A reply to Sir Richard Temple's minutes of March 7th and 14th, 1877, as to the sufficiency of a pound of grain as the basis of famine wages.
2. Digby: The Famine Campaign in Southern India. Longmans, vol. ii., p. 196, 1878.
3. Cornish: Madras Quarterly Journal of Medical Science, vol. viii., 1865. Observations on the Nature of the Food of the Inhabitants of Southern India and on Prison Dietaries in the Madras Presidency.

Cornish was sanitary commissioner for Madras during the famine of 1877–78. Porter was in charge of a famine relief camp at the same period. He published exact post-mortem findings in his book, "The Diseases of the Madras Famine of 1877–78," by Alexander Porter, M.D., F.R.C.S.I. (Madras Government Press, 1889).

I am, Sir, yours faithfully,

Bristol, April 16th, 1920. J. A. NIXON.

ANÆSTHETISTS' REMUNERATION.

To the Editor of THE LANCET.

SIR,—Since at the present time a greater degree of skill is being demanded on the part of anæsthetists than a few years ago, it is only fair that what then was an adequate remuneration should be correspondingly raised, apart from the question of the higher rate of living, the greater expense of apparatus, anæsthetic drugs, and locomotion. It is, however, necessary to educate the public, and to a lesser extent the general practitioner, to recognise the market value of the skilfully given anæsthetic. Surgeons can help anæsthetists by insisting that the patient should receive a note of fees from the anæsthetist himself, by telling the patient beforehand the amount of such fee, and by not accepting an inclusive fee as is so often done. In this way the anæsthetist would soon cease to be regarded merely as the appanage of the surgeon.

Some years ago in America I was informed that a skilful anæsthetist expected a fee corresponding to 25 per cent. of that of the surgeon. It is only within the last few years that a 10 per cent. ratio has come into force in this country. It does not seem a fair thing for a surgeon who is asked to reduce his fee, say, from 100 guineas to 50 guineas to expect his anæsthetist to reduce his from 10 guineas to 5 guineas, unless the ratio is considerably higher than at present; and I think very few surgeons would object to anæsthetists' fees being raised to a sum corresponding to 20 per cent. of that of the surgeon's fee with a minimum of 5 guineas. I am, Sir, yours faithfully,

HUGH R. PHILLIPS, M.D.

Cavendish-court, Cavendish-square, W., April 17th, 1920.

THE FEDERATION OF MEDICAL AND ALLIED SOCIETIES.

To the Editor of THE LANCET.

SIR,—Recent events have emphasised the urgent necessity of providing more adequate means for the collective expression of medical opinion in the councils of the nation, and, if public sympathy is not to be alienated from our cause, we must ensure that the means adopted are compatible with the dignity of our profession. The manifest unfairness of much of the public treatment meted out to us as a profession has largely, if not entirely, resulted from the failure of our various organisations to coöperate in giving expression to their views in the guidance of public opinion and in assisting to frame legislation on health matters. Whilst fully appreciating the great services many of these organisations have rendered, one has to recognise that they are only able to

represent the views of their members and that coöperation would tend greatly to increase their value to the profession and to the community in general. Hitherto a few of the bodies have coöperated in times of emergency, but there has never been available a permanent conference table to which the public and the Government could turn for a united opinion on matters of national health.

This need for a central representative body, in which all branches of medical and allied practice can coöperate, has been met by the Federation of Medical and Allied Societies which has already secured the support of some 40 organisations, varying in influence from the Royal Society of Medicine to the smaller provincial medical societies, and in addition provides the coöperation of all the allied professions, as represented by the British Dental Association, the College of Nursing, Royal British Nurses' Association, Pharmaceutical Society of Great Britain, Incorporated Midwives' Institute, and other bodies. Each of these organisations has representation in the Federation in accordance with its membership and retains inviolate its individuality, freedom of action, and right to express its views separately or collectively as may seem expedient.

The Federation has already been privileged to render service in linking up existing bodies, and in voicing their demand for a public inquiry into the conditions of medical service under the Insurance Acts. Its utility is much increased by the fact that seven medical Members of Parliament have seats on its Council and, as its position becomes stronger, it will be able to render increasing assistance to medical candidates, irrespective of party, and thus materially help in increasing medical representation in the House of Commons.

The Council of the Federation is now able to give effect to one of the original terms of its reference by admitting as individual Associates members of the medical and dental professions. Circulars are being sent out inviting applications for such membership, at an inclusive subscription of half a guinea, and it is hoped that all medical men will contribute the small sum asked and take an active part in ensuring the permanent success of a movement which provides practical means for the collective expression of medical opinion in guiding legislation through the difficulties inseparable from the reconstruction of the health services of the country.

I am, Sir, yours faithfully,

N. HOWARD MUMMERY,
General Secretary, the Federation of Medical and Allied Societies.

5, Vere-street, Cavendish-square, London, W.1,
April 14th, 1920.

LIFE ASSURANCE AND GLYCOSURIA.

To the Editor of THE LANCET.

SIR,—I have read with interest the expected criticism of my article, and am glad to learn the valuable opinions of your correspondents. So long as assurance companies desire that no information should be given to the proposer in any case of the result of the medical examination, it is the duty of the medical officer to observe this rule, and I follow it myself in all cases. My remarks on this point referred to one class of cases only—glycosuria, often intermittent or temporary. In these cases, after the medical examination, the proposer is informed by the assurance company that he is rejected. If the reason is asked the reply is, "On account of sugar in the urine" (or urinary change). He may at once conclude he is suffering from severe diabetes and be greatly shocked, or he may be angry and, feeling no disability, take no further heed to his condition; but usually he consults his medical attendant (and this will be at least a few days after the examination), and when the urine is again tested it may be quite free from sugar. And here the trouble arises. The proposer concludes that a mistake must have been made at one of the examinations. He consults other medical men, who may also find the urine quite normal, and he concludes he has been unfairly treated and disputes occur. Having been often requested to help to settle such disputes, it still appears to me desirable that some other course of procedure should be followed than that usually adopted.

In my article the various tests for glucose were not the subject of consideration. I spoke of Fehling's solution or some of its modifications. Many of the modifications are much superior to Fehling's solution (Benedict's is one of them) and are preferable. The phenyl-hydrazin test and the fermentation test are of much service, since negative results would show that the reducing substance in the urine was not glucose; but many other tests would be required to determine what the reducing body was; and, of course, if these two tests give positive results, other tests are required to distinguish between glucose and lævulose, maltose, &c. I have found blood examinations of much interest, and am glad to note the value attached to them by many writers in the last five years; but it would not be practicable to require them frequently in examinations for life assurance.—I am, Sir, yours faithfully,

Manchester, April 17th, 1920. R. T. WILLIAMSON.

BLIND MASSEURS.

To the Editor of THE LANCET.

SIR,—Will you allow me to draw the attention of your readers to the fact that at the recent examinations of the Incorporated Society of Trained Masseurs, which are known throughout the world for their completeness, Corporal Herbert Vickers, a blinded soldier of St. Dunstan's, passed first in all subjects. That this was no mean accomplishment may be judged by the fact that there were nearly 300 entrants for this examination. Of these less than 50 per cent. passed; while of the 16 St. Dunstan's entrants, of whom Corporal Vickers was one, 15 passed, and the one failure was accounted for by the fact that the unsuccessful candidate had for some weeks before the examination suffered severely from neuralgia, which had almost entirely robbed him of sleep.

I am, Sir, yours faithfully,

ARTHUR PEARSON,
Chairman, Blinded Soldiers' and Sailors' Care Committee.

St. Dunstan's, Hanover Gate, Regent's Park, N.W.,
April 16th, 1920.

SIR PATRICK DUN'S HOSPITAL, DUBLIN: WAR MEMORIAL.

To the Editor of THE LANCET.

SIR,—The memorial brass and bed to 30 old Dun's students who fell or died on active service, which has been subscribed for by their comrades who also served in the war, is now approaching completion. A circular was sent to 415 old Dun's men who were on active service concerning this memorial, but it may not have reached some. Any who may wish to subscribe will kindly communicate at once with me at the hospital.

I am, Sir, yours faithfully,

HENRY C. DRURY,
April 20th, 1920. Hon. Sec., Sir Patrick Dun's Hospital, Dublin.

POST-GRADUATE COURSE ON SPA TREATMENT.—It is proposed to hold a post-graduate course from June 7th to 19th, on Spa Treatment in Bath, in conjunction with the Fellowship of Medicine and Post-Graduate Association. An admirable programme has been arranged and may be obtained from Dr. R. G. Gordon, of 6, Queen-square, Bath, secretary of the local committee. It includes morning clinical lectures on gout, arthritis of diverse ætiology, sciatica, fibrositis, and mere general disease, by Drs. R. L. J. Llewellyn, F. G. Thomson, King Martyn, R. Waterhouse, J. Lindsay, and R. G. Gordon. Part of the mornings will be absorbed by visits to hospital wards. In the early afternoons visits will be made to bathing establishments and the apparatus of balneotherapy will be demonstrated. At 5 P.M. lectures on subjects in relation to spa treatment will be given, including one on re-education by Dr. Gordon, one on diet by Dr. Wilson Smith, and one on the contra-indications and limitations of spa treatment by Dr. Llewellyn.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Medical Men and the Budget.

THE Budget, as explained by the Chancellor of the Exchequer to the House of Commons on Monday, April 19th, contains several important changes in taxation. The standard rate of income-tax is unchanged, but new schedules are set out giving effect to the recommendations of the recent Report of the Royal Commission on Income-tax and Super-tax. An entirely new system of graduation is adopted. The duties on spirits are increased from 50*s.* to 72*s.* 6*d.* per proof gallon, and the beer duty is raised from 70*s.* to 100*s.* per standard barrel. Mr. CHAMBERLAIN stated that he proposes to continue the existing motor-car taxes and motor-spirit duty until Dec. 31st next, when they will be superseded by the new tax on motor vehicles recommended by the Committee set up by the Ministry of Transport, whose report was recently laid before Parliament. Motor-cars will in future pay a tax of £1 per horse-power unit. The abatement of duty granted in the case of motor-cars used by medical practitioners and veterinary surgeons will cease.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 14TH.

Disease as a Ground for Divorce.

Mr. RENDALL moved: "That in the opinion of this House it is desirable that legislative effect should be given without delay to the recommendations contained in the Majority Report of the Royal Commission on Divorce."

Lieutenant-Colonel RAW, in seconding the motion, said he was not in favour of weakening the marriage tie in any way in normal conditions. He would limit his remarks to three recommendations of the Royal Commission Majority Report—namely, those in reference to incurable insanity, habitual drunkenness, and the position of the person who was the wife or husband of one serving a commuted death sentence. He proposed to consider them more from the medical aspect than any other. In the United Kingdom we had unfortunately 140,000 persons who were certified as insane under the Lunacy Acts, and of that number 50,000 were suffering from what was called dementia, or degeneration of the brain itself, which disease was incurable. He urged that dementia ought to be a ground for divorce. Between 30,000 and 40,000 of these people were married, and in a very large number of instances the husband or wife might not know each other; in fact, a great many of them did not realise that they were married at all. Out of a large experience amongst the insane he might tell the House that he had never known any case of recovery from dementia which had lasted for five years; that was the period suggested in the Majority Report as the time of detention under the Lunacy Acts after which a person who was suffering from this form of insanity should be examined at the request of wife or husband by a body of medical experts, who would then satisfy themselves as to whether the disease was curable. If they were satisfied that it was incurable that might be a ground for divorce. These cases were particularly hard amongst the poor. He would not suggest that any other form of physical or mental disease should be a ground for divorce except the particular one he had mentioned, because as that was an incurable form there could not be any relief. The sufferer might live for 40 or 50 years before death came. Another form of mental disease which was most distressing was epilepsy, and certainly he hoped that the day would come when marriage would be prohibited to those suffering from it, and from other forms of mental disease, if only on the ground of the value to the State of healthy people, whereas, as they knew, heredity played a very important part in the production of all mental disease. Habitual drunkenness destroyed the very basis of married life. It was proposed that after a separation order had been granted, and had been in force for three years, if the drunkenness continued, and there was no evidence of any improvement, the husband or wife might petition for divorce. It was said on very high authority, by those who had great experience in cases of the kind, that from 90 to 95 per cent. of habitual drunkards died drunkards. It had been shown by long experience that if habitual drunkenness continued for three or four or five years without any evidence of improvement, there was practically no possibility or hope of any cure. In his opinion these two conditions, which were unfortunately so prevalent, incurable insanity and habitual drunkenness for three years, were certain grounds for petition for divorce. As regarded the commuted death sentence, he had seen cases of that sort, and he thought there was nothing more distressing than, say, that an innocent woman had to remain the wife of a convict for 20 or 25 years without any means of improvement.

Mr. R. MCNEILL moved the following amendment: "That in the opinion of this House, while it is desirable to place the sexes on a footing of equality in regard to divorce, any change in the law which would impair the permanence of the marriage contract would be harmful to the best interests of the community." After criticising strongly the attitude of the Lord Chancellor and those who supported the Majority Report, Mr. McNeill referred to the question of venereal disease as a ground for divorce under the head of cruelty. He admitted that it was a very serious thing, but it was quite unnecessary to put it in as one of the grounds of cruelty, because under an agreed Bill it was already being laid down and accepted that venereal disease contracted before marriage would be a ground for nullity, whereas if it was contracted after marriage it might be accepted as conclusive evidence of adultery upon which a decree might be granted. Unless it was on account of the moral taint which attached to that particular disease he could not understand why it should be singled out. As far as cruelty was concerned, he did not know that there were not other communicable diseases that were as bad, certainly as far as danger to life and to the children was concerned. Speaking entirely as a layman, he imagined that medical men would say that tuberculosis was a disease which might just as well be a ground for divorce as one of these more disgusting diseases. Again, why was divorce to be granted because one of the parties was habitually intoxicated, whereas no relief whatever was given for the still greater vice of morphomania?

Mr. EVELYN CECIL seconded the amendment.

On a division the amendment was carried by 134 votes to 91.

Civil Veterinary Service in India.

Sir RICHARD COOPER asked the Secretary for India if he had received representations of the position of the civil veterinary service of India owing to the inadequate salaries of its officers and the impossibility of retaining men of ability; if he would say what increase in pay had been generally made in this service since 1914; and if he could announce the intentions of the Government of India on this matter.—Mr. MONTAGU replied: Proposals for improving the pay and prospects of the Indian Veterinary Service have recently been received from the Government of India, and these are now being examined. An announcement will be made as early as possible.

Indian Medical Degrees.

Mr. WATERSON asked the Under Secretary of State for the Colonies if he was aware that persons holding Indian university medical and law degrees, such as L.M. and S. and B.A.B.L., who were eligible to practise medicine and law respectively in India, were not allowed to so practise in British East Africa; and, if so, would he state why in British East Africa, where the protectorate was first established with the object of safeguarding the interests of His Majesty's Indian subjects in that country, where Indian law was to-day administered, and where Indians preponderated both in point of numbers and in vested interests, the said Indian university medical and law degrees were not recognised.—Lieutenant-Colonel AMERY replied; I explained to the honourable Member in my answer to his question on March 24th that Indian medical degrees or diplomas are recognised in the East Africa Protectorate, provided that they entitle the holder to registration in the United Kingdom. Advocates who have been admitted and are entitled to practise before one of the High Courts in British India are entitled to practise in the East African courts. The general question of Indians in East Africa is under consideration between the Secretary of State and the Governor of the Protectorate.

Municipal Hospital at Bradford.

Mr. LEONARD LYLE asked the Minister of Health whether he had given his consent to the establishment of a municipal hospital at Bradford; if so, for what special reason and on what conditions; whether this consent would be extended to other local authorities putting forward similar proposals; whether this step agreed with his policy as enunciated on Feb. 26th, 1919, in the House and elsewhere at other times; whether he was now in a position to make a statement on the policy of his department in respect to voluntary hospitals; and whether, before sanctioning further hospitals supported out of public funds, he would consider the position of voluntary hospitals, which had for years done invaluable public work, which were now hard pressed for funds to continue their efforts, and which were bound to be most prejudicially affected by competition on the part of organisations which would never experience financial stress in respect either of upkeep, maintenance, or administration.—Dr. ADDISON replied: I have sanctioned a scheme supported by all parties on the Bradford Council for the establishment of a municipal hospital which appeared to me to be the only practicable method of providing the institutional accommodation necessary to meet the needs of the city. I see nothing in this decision inconsistent with the statement

to which the honourable Member refers. As regards the last part of the question, I fully appreciate the value of the work done by the voluntary hospitals, and I am aware of the difficulties under which they are now labouring; but I am not yet in a position to make any definite statement.

Mr. LYLE: Does this mean that every other borough and town will be able to set up hospitals if they apply in the same way?—Dr. ADDISON: Pending further legislation, which we are now preparing, I have to consider cases on their merits as they arise. I decided as I did because it was the only way of meeting the necessities of the case.

Deaths from Anæsthetics.

Mr. GILBERT asked the Minister of Health whether, in view of the number of inquests held in London on persons who had died from anæsthetics, he could ask the Medical Research Committee to undertake a full inquiry into the whole question of anæsthetics and their administration with a view of saving life in the future; and whether, if this could not be done, he would have the recommendations of the Home Office Departmental Committee of 1910 on the same subject put into practice.—Dr. ADDISON replied: In reply to the first part of the question, having regard to the scientific investigations which have been made in comparatively recent years, I am not at present convinced that there is need for a further investigation of the character that appears to be suggested, but I will give the matter my careful consideration. I have nothing to add to what I have already said in reply to previous questions on the matter dealt with in the second part of the question.

The National Physique.

Mr. CLOUGH asked the Minister of Health whether his department had now considered the disclosures affecting the health of the people in the report upon the physical examination of men of military age by National Service medical boards; and whether he was bringing to the notice of the local authorities more especially mentioned the desirability of taking such reform as was possible in the improvement of conditions of housing and industry.—Dr. ADDISON replied: The report to which the honourable Member refers is only part of a mass of evidence indicative of the need for the reorganisation and extension of public health services, and for better housing, but it is impossible within the limits of a reply to a Parliamentary question to set out all the steps to this end which have been taken or are in contemplation.

THURSDAY, APRIL 15TH.

Cost of Lunatic Patients.

Mr. CHARLES EDWARDS asked the Minister of Health whether he was aware of the continued increase in the cost of lunatic patients chargeable to boards of guardians maintained at lunatic asylums and that the 4*s.* per head now paid was totally inadequate; and whether he would introduce legislation to amend the Local Government Act, 1888, so as provide for boards of guardians receiving a much higher sum than the above.—Dr. ADDISON replied: I can only repeat that in view of the contemplated legislation for the reform of the Poor-law this point could not advisedly be dealt with at the present time.

Gratuity for Temporary Army Nurses in India.

Brigadier-General CROFT asked the Secretary for India whether he would explain why nurses temporarily attached to the Indian Army nursing service, who had done such good work on active service both in hospital ships between Mesopotamia and German East Africa and Bombay and had served in Mesopotamia, had been refused a gratuity by the Pay Department in India, whilst members of the Indian Army nursing service had received such gratuity, in spite of the fact that the temporary nurses did their full share of work, and had to put up with many discomforts in the discharge of their duties.—Mr. MONTAGU replied: The Government of India were authorised on March 11th to issue the gratuity to the temporary nurses, and payment will be made as soon as possible.

Unqualified Opticians.

Mr. SITCH asked the Lord President of the Council if it was his intention to appoint a committee to inquire into the supply of spectacles and eyesight glasses generally by vendors not qualified by examination, on the same lines as those of the recent inquiry into unqualified dental practitioners.—Dr. ADDISON (Minister of Health) replied: The conditions prevailing which rendered necessary the recent inquiry referred to have no parallel in the circumstances connected with the production of optical appliances.

MONDAY, APRIL 19TH.

Pensions Medical Assessors.

Major MOLSON asked the Pensions Minister whether, as the medical men employed as assessors on sessional rates were continuously employed for the same hours as the medical commissioners, he could see his way to pay them as equitably and allow them leave with pay and sick leave with pay.—Major TRYON (Parliamentary Secretary to the Ministry of Pensions) replied: It is not considered that medical assessors employed at sessional rates are inequitably paid. Their conditions of service are different from those of whole-time medical commissioners or deputy commissioners. The question of leave with pay cannot arise in the case of men who are engaged on a sessional and not a salaried basis.

Ear Discharge as Pension Disability.

Mr. HARRY HOPE asked the Pension Minister whether a man suffering from discharge from the ears, contracted while serving in the army, was considered as having a disability; and whether he was aware that an ear specialist serving on the Pensions Board, Adelphi Hotel, Glasgow, had passed a man nil-disability though suffering as described.—Major TRYON replied: I am unable to reply to this question without further information. A man suffering from a disability attributable to or aggravated by his military service is eligible for an award of pension or gratuity according to the extent of his disablement. If the honourable Member will furnish me with particulars of the individual case which he has in mind I will have inquiries made and inform him of the result.

Pensions of Naval and Military Medical Men.

Mr. ROBERT YOUNG asked the Pensions Minister if he would state the number of regular naval and military medical men employed by the Ministry who were in receipt of pensions; and how many of these received pensions of over £500 a year.—Major TRYON replied: There are 12 regular naval or military medical men employed on a salaried basis in the Ministry in various parts of the country who are in receipt of pension in respect of their naval or military service. Inquiry is being made as to the amount of pension in each case, and the honourable Member will be informed of the result.

TUESDAY, APRIL 20TH.

Influenza and Double Pneumonia at Sea.

Lieutenant-Colonel ARTHUR MURRAY asked the Secretary for War and Air if he would state the reason why Second-Corporal James Munro Selbie, No. W.R. 288,177, R.O.D., Royal Engineers, who, after disembarkation from H.M.S. *Czaritza*, died at Devonport on Feb. 8th from influenza and double pneumonia, and whose temperature on the arrival of the *Czaritza* was 103·4°, was not taken off the ship at Gibraltar and sent to hospital for treatment; and whether, in view of his gradually rising temperature, his chances of recovery would have been greater had he been so disembarked.—Mr. CHURCHILL replied: I have no specific information as to the reason why Second-Corporal Selbie was not disembarked at Gibraltar. From the reports received, however, it appears that until after leaving Gibraltar the case was one of uncomplicated influenza, and as such would not ordinarily be taken off a ship en route, since adequate provision for treatment exists on board. I am advised that there is no reason to suppose that the complications which unfortunately led to this soldier's death would not have supervened at or about the same period, even though he had been disembarked at Gibraltar.

Leg Amputations and Mechanical Limbs.

Mr. ALFRED DAVIES asked the Pensions Minister whether he could state the number of pensioners in the north-western region who had sustained leg amputations, and the number of arm amputations; how many had been supplied with mechanical limbs; the cost to maintain them in repair prior to the supply of the second mechanical limbs; and whether he could state how many cases had been supplied with a second mechanical limb.—Major TRYON replied: The number of pensioners in the north-western region with leg and arm amputations respectively are 3550 and 1500. All of these pensioners have been fitted with artificial limbs. In addition, there are about 140 serving soldiers who are not yet ready to be fitted. The cost of maintaining the limbs in repair both prior to the supply of the second artificial limb and after is borne by the Ministry of Pensions. The issue of second limbs has been proceeding steadily since last October, but I am unable to state how many of the pensioners now supplied with them reside in the north-western area.

Service Teachers and Death Gratuity.

Mr. STANTON asked the President of the Board of Education if he was aware that ex-Service teachers who were no longer A 1 medical category through wounds or other disablement contracted on military service did not become entitled to the death gratuity under the terms of the Education Act, 1918; was he aware that in order to ascertain their present medical state these disabled ex-Service teachers were compelled to undergo a medical examination at their own expense, and should the result be that they were below B 1 their next-of-kin would receive no gratuity; and whether, seeing that the medical state of these men was A 1 on entering His Majesty's forces, and that a teacher who stayed at home because of unfitness could claim the benefit for his

next-of-kin, he would take steps to rectify this state of affairs.—Mr. FISHER replied: It is not the case that ex-Service men whose category was below B 1 are regarded as ineligible for a death gratuity. The total number of ex-Service teachers held to be ineligible for death gratuities is only 35.

Medical Men and Motor-car Duty.

The House went into Committee of Ways and Means on the Budget resolutions.

Sir J. BUTCHER raised the question of the abolition of the abatement of duty granted in the case of motor-cars used by medical practitioners and veterinary surgeons. He asked the Chancellor of the Exchequer to reconsider this matter, which would be a great hardship to these gentlemen, who have to travel about the country largely in pursuit of their profession.

Mr. CHAMBERLAIN said he would convey what the honourable Member had said to the Minister of Transport, who was dealing with this aspect of the Budget. The honourable Member might also consult with his right honourable friend on the matter.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, ROYAL COLLEGE OF SURGEONS OF EDINBURGH, AND ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following candidates have passed the Triple Qualification Examinations:—

THIRD EXAMINATION.

Ian Bruce Cummings, William Dunsmore Oswald, James Brown Hendry, William Taylor Davie, Robert Emmet O'Keeffe, Herbert John Appleyard, Peter James Boyd Dyce, Raymond Levey, Marjory Jane Ann Ogilvie, William Muirhead Reid, Adrian Vintcent Bergh, Alan Wilson Hart, William Bethune Stott, William Alexander Blyth Clark, Leonard Edward Murray, and John Joseph Laurence McDonald.

Pathology.—James Readdie, Jemima Marianna McKechnie Calder, James Maxton McInnes, James McNie Campbell, and Joseph Alfred Henry Sykes.

Materia Medica.—Edward James Allan, Alexander Wilson Buchan, and William Gray.

FINAL EXAMINATION.

Albert Christian Lornie, Harry Barlow, Robert Charles Dow, William Grant, Robert Smith, George Shuttleworth Barnett, Owen Fitzpatrick, George Murray Shaw Lindsay, Harry Cohen, Francis Paul McNulty Clarke, George Malayramon Kerry, Anand Shridhar Paranjpe, Elly Isserow, and John Francis Edward Burns.

Medicine.—Douglas Chiene Scotland, Thomas Poole, John Stevenson, Thomas Arnoldus du Toit, and James Stewart Durward.

Surgery.—James MacGlachan, James Stewart Durward, and John Haldane Bain.

Midwifery.—Walter Sydney Patrick, Douglas Chiene Scotland, Arthur Cuthbertson, Thomas Poole, William Wolfe Glucksman, Harry Wishart Whytock, James MacGlachan, Walter Granville Carew, and Ardishir Jahangerge Vakil.

Medical Jurisprudence.—John Gerald Collee, Reginald Edward Hopton, John Nagard, Alexandra Mary Limont, Ronald Gillan Clouston, Pauline Figdor, Gracie Olwen Davies Evans, and Andrew Wood Smith.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Professor Grafton Elliot Smith has been elected to the Mary Louisa Prentice Montgomery Lectureship in Ophthalmology. The subject of his first lecture, which will take place in October, 1920, will be "The Influence of Stereoscopic Vision on the Evolution of Man."

THE TUBERCULOSIS SOCIETY OF GREAT BRITAIN AND IRELAND.—A general meeting of this society will be held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, London, W., on Monday, April 26th, at 8 P.M. Dr. Clive Riviere will read a paper on Some Points in the Early Diagnosis of Pulmonary Tuberculosis, to be followed by discussion. Members willing to assist in the arrangements for the congress at Leeds on May 13th and 14th, 1920, are asked to communicate with the hon. secretary.

ROYAL ARMY MEDICAL CORPS FUND (REGULAR ARMY) AND ROYAL ARMY MEDICAL CORPS OFFICERS' BENEVOLENT SOCIETY (REGULAR ARMY).—The annual general meeting of the Royal Army Medical Corps Fund will be held in the library of the Royal Army Medical Corps College, Grosvenor-road, S.W., at 2.30 P.M., on Monday, June 14th. The Director-General will preside. It is hoped that all subscribers who can spare the time will be present, and will freely express their views on any point connected with the Fund. The annual general meeting of the Royal Army Medical Corps Benevolent Society will take place immediately afterwards. Any officers desiring information regarding these Funds are requested to communicate beforehand with Lieutenant-Colonel E. M. Wilson, the secretary, at 76, Claverton-street, S.W.1, so that there may be no delay in dealing with any questions asked.

ROYAL ARMY MEDICAL CORPS CENTRAL MESS FUND.—The annual general meeting of subscribers to the Royal Army Medical Corps Central Mess Fund will be held in the Library of the Royal Army Medical Corps College on Monday, June 14th, following immediately that of the Royal Army Medical Corps Officers' Benevolent Society. Officers desiring information about this fund are asked to communicate beforehand with Captain J. T. Clapham, the honorary secretary, at 3, Homefield-road, Wimbledon, S.W., so that there may be no delay in dealing with any questions which may be asked. Notice of any definite proposal which it may be desired to bring forward should be sent to the honorary secretary in order that it may appear on the agenda paper.

AUXILIARY ROYAL ARMY MEDICAL CORPS FUNDS, 11, Chandos-street, Cavendish-square, W.1, honorary secretary, Colonel W. Hale White, R.A.M.C.(T.).—The annual general meeting of members of the above Funds will be held on Friday, April 30th, at 4 P.M., at 11, Chandos-street, Cavendish-square. The annual reports will be presented and the officers for the ensuing year elected.

Mr. Frederic Hoffmann, chairman of the Hoffmann-La Roche Chemical Works, Ltd., died at Basle, on April 18th, after a long illness.

THE COUNCIL OF BRITISH OPHTHALMOLOGISTS.—A general meeting, which all British ophthalmic surgeons are invited to attend, will be held at the house of the Royal Society of Medicine at 1, Wimpole-street, on Friday, April 30th, at 4 P.M. The business will be to receive the report of the Council on the work done during the last two years, and to consider the following amendments to Rule 3 of the Council: In Clause *a* (permanent members) to add "and the Master of the Oxford Ophthalmological Congress." In Clause *b* (elected members) to substitute "ten members elected annually" where it now reads "nine," and "two by the Council of the Oxford Ophthalmological Congress," instead of "one" as at present.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—The annual congress will be held at the House of the Royal Society of Medicine from Thursday to Saturday, April 29th to May 1st. On Thursday, at 10 A.M. to 12.30 P.M., the presidential address will be given by Mr. J. B. Story, and papers will then be read as follow:—Mr. C. H. Usher: Enlarged Corneæ in Goldfish. Mr. E. Treacher Collins: Megalo-cornea and Micro-cornea. Mr. John Rowan: Are not some Cases of Glaucoma Better Treated without Operation, and, if so, what are the Indications? Mr. A. Zorab: Later Notes on Aqueoplasty. Mr. T. Harrison Butler: Notes on Infection after Operations for Cataract. Mr. G. H. Pooley: Abnormalities of the Lacrymal Apparatus and their Treatment. Mr. G. Harvey Goldsmith: A case of Double Traumatic Dislocation of the Lens. Mr. G. F. Alexander: (1) A Position of the Head Favourable to the Operation for Cataract; (2) an Operation for Advancement in Strabismus. In the afternoon a clinical meeting will be held at 2.45 P.M., at the Royal London Ophthalmic Hospital, City-road, when there will be an exhibit of books, drawings, and museum specimens belonging to the hospital, and cases will be shown by Mr. A. Lawson, Mr. A. Zorab, Mr. F. Juler, and others. Mr. B. T. Lang will show a new perimeter. At 4 P.M. Mr. Percy Flemming will give a demonstration on the Neighbourhood of Moorfields in Former Days. After tea the discussion of cases will be resumed at 5 P.M., and at 7.30 P.M. members will dine together at Oddenino's Imperia Restaurant, 60, Regent-street (12*s.* 6*d.* per head).

On Friday, at 10 A.M., a discussion on Diabetes in Relation to Diseases of the Eye will be opened by Sir Archibald Garrod and Mr. R. Foster Moore, and the following will speak: Dr. O. Leyton, Mr. G. Mackay, Dr. Poynton, Mr. P. H. Adams, Dr. P. J. Cammidge, Mr. Gray Clegg, Dr. A. Renshaw, Dr. C. O. Hawthorne, Lieutenant-Colonel F. P. Maynard, Mr. R. R. James, and others. The business meeting will be held at 5.30 P.M. In the evening, at 8 P.M., papers will be read as follow: Mr. H. M. Traquair: Anatomically Separate Anterior Commissure at the Chiasma in a Case of Pituitary Tumour with Acromegaly. Dr. G. Holmes: Tumours Involving the Optic Nerves and Chiasma. Mr. M. L. Hine: Primary Epithelioma of the Ciliary Body. Mr. E. Clarke: A Further Note on the Accommodation of the Eye. Mr. H. Neame: Cysts of the Retina. Mr. W. Wallace: A Glyptic Method for Representing Certain Conditions of the Fundus in Disease. Mr. A. W. Stirling: A case of Melanoma of the Iris.

On Saturday a visit will be paid at 10 A.M. to St. Margaret's Hospital, Leighton-road, Kentish Town, the special hospital of the Metropolitan Asylums Board for cases of ophthalmia neonatorum, where a discussion on the Prevention and Treatment of Ophthalmia Neonatorum will be opened by Dr. G. Fitzgibbon, Master of the Rotunda Hospital, and Mr. M. S. Mayou, and the following will speak: Mrs. Scharlieb, Dr. Macrory, Mr. S. Stephenson, Mr. M. Ramsay, Mr. J. Wharton, Mr. A. L. Whitehead, Mr. T. Stevenson, and Mr. C. Killick.

GENERAL NURSING COUNCIL.—The following have been appointed to form the first General Nursing Council in England and Wales under the Nurses Registration Act of 1919. Mr. Priestley will act as chairman of the Council.

Appointed by the Privy Council.—Lady Hobhouse, Mr. J. C. Priestley, K.C.

Appointed by the Board of Education.—Hon. Mrs. Eustace Hills, Miss Batty Tuke, Bedford College.

Appointed by the Minister of Health.—Rev. G. B. Cronshaw (Radcliffe Infirmary, Oxford), Dr. E. W. Goodall, Dr. A. Bostock Hill, Dr. Bedford Pierce, Sir T. Jenner Verrall.

Nurses appointed by the Minister of Health.—Miss A. Cattell (private practice), Mr. T. Christian (Nurse, Banstead Lunatic Asylum), Miss A. Coulton (Matron, Shadwell Children's Hospital), Miss R. Cox-Davies, R.R.C. (Matron, Royal Free Hospital), Miss A. Dowbiggin, C.B.E., R.R.C. (Matron, Edmonton Poor-law Infirmary), Mrs. E. G. B. Fenwick (formerly Matron, St. Bartholomew's Hospital), Miss A. Lloyd-Still, C.B.E., R.R.C. (Matron, St. Thomas's Hospital), Miss M. MacCullum (Professional Union of Trained Nurses), Miss I. Macdonald (Royal British Nursing Association), Miss A. M. Peterkin (General Superintendent, Queen Victoria Jubilee Nurses), Miss E. Smith (Welsh Superintendent, Queen Victoria's Jubilee Institute for Nurses), Miss M. E. Spearshott, C.B.E., R.R.C. (Matron, Royal Infirmary, Manchester), Miss E. C. Swiss (Health Visitor for Willesden), Miss S. E. Villiers (Matron, Stockwell Fever Hospital), Miss C. Worsley (Matron, Liverpool Children's Hospital), Miss C. S. Yapp (Matron, Ashton-under-Lyne Poor-law Infirmary).

INCREASED CAPITATION FEES FOR POSTAL MEDICAL OFFICERS.—In response to representations from the Association of British Postal Medical Officers the capitation fee payable to postal medical officers has been raised from 8*s.* 6*d.* (inclusive of medicine and attendance) to 13*s.* from Jan. 1st last. The rate of remuneration for attendance in itinerant and emergency cases is to continue for the present at the recently revised rate of a half-yearly maximum of 10*s.* 6*d.*

A CONFERENCE ON DENTAL HYGIENE.—The Food Education Society will hold a conference on the Prevention of Diseases of the Teeth at the Albert Hall, Manchester, from May 13th to 15th. On the opening morning Dr. Harry Campbell will speak on the Extent and Consequences of Dental Disease, Dr. J. Sim Wallace on the Cause and Prevention of Dental Caries, and Dr. James Wheatley on Sweets and Dental Caries. In the afternoon the Effect of Certain Dietetic Factors on the Development of Teeth and Jaws will be discussed by Mrs. Edward Mellanby, and Dietetic Errors and other Causes of Irregularities of the Teeth by Dr. J. H. Badcock. In the evening Dr. Harold Waller will speak on Dental Disease among Nursing and Expectant Mothers. On May 14th in the morning Mr. F. M. Holborn, L.D.S., will open a discussion on Pyorrhœa, and in the afternoon Mr. W. H. Jones, L.D.S., will speak on the Importance of Dental Attention during First Dentition, and Dr. A. T. Pitts on the Temporary Dentition in Health and Disease. On May 15th a paper on Some Thoughts on the Problems of Prevention will be read by Mr. C. Doswell Wallis, L.D.S., and the meeting will conclude with some remarks on Aids to Fitness by Mr. C. E. Hecht, hon. secretary, Food Education Society, 265, Strand, London, W.C.2, to whom applications for membership (5*s.*) should be sent.

DEATH OF MR. E. A. MALING, M.R.C.S. — On April 12th, at the age of 81, after a busy, happy, and successful life, Edwin Allan Maling passed peacefully away at his residence at Darlington. He was descended from a well-known Sunderland family, his father being Mr. E. Haygarth Maling, the founder of the Durham County and Sunderland Eye Infirmary, and a former surgeon of the Royal Infirmary. Mr. Maling was educated in the Grange School, Sunderland, and King's College Hospital, London, and held the post of house surgeon of the Royal Infirmary, Sunderland, for five years from 1860. In those days infectious diseases were received in the general wards, and for some months he attended, practically single handed, many cases of small-pox and typhus fever during a severe epidemic in the town. On leaving the infirmary Mr. Maling joined as partner for ten years Mr. G. Welford, the first surgeon in the North of England to perform a successful ovariotomy. Later, he was appointed an assistant surgeon, and then full surgeon, and since his resignation from the active staff in 1892 had been honorary consulting surgeon to the Royal Infirmary. From 1894 to 1903 he was in partnership with Mr. W. Robinson, the present senior surgeon to the Royal Infirmary. For 40 years Mr. Maling was one of the best-known medical men of the town and district, his courteous manners and genial disposition, his cheery voice, even temper, and constant willingness to work made him one of the busiest practitioners of the North of England in his day; and although he retired from practice in December, 1903, and went to live in the country, hundreds of his old patients look upon his decease as the loss of a constant friend. Though reserved in speech, Mr. Maling was an excellent judge of character, and his great experience and sound judgment made him a rapid diagnostician. For 40 years Mr. Maling was a J.P. for the county of Durham, and for many years past he was chairman of the Sunderland County Bench. Mr. Maling married a daughter of the late Mr. James Hartley, sometime M.P. for the borough of Sunderland, who survives him. He leaves also three daughters and three sons, the youngest of whom, Mr. G. A. Maling, gained the V.C. early in the war whilst serving in the R.A.M.C.

THE annual dinner of the West London Medico-Chirurgical Society will be held at the Wharncliffe Rooms, Hotel Great Central, on Thursday next, April 29th, at 7 P.M. Those intending to be present should communicate with Dr. J. F. Halls-Dally, 93, Harley-street, W. The triennial gold medals, in the gift of the society, will be presented during the evening.

A 23rd Divisional Medical Dinner will be held at Oddenino's, Regent-street, London, W., on June 5th, at 7.15 P.M. All ex-medical officers of the above division who wish to attend are requested to send their names (with remittance of 15*s.* for dinner, exclusive of wine) to Major W. J. Pearson, New University Club, St. James's-street, London, S.W. 1. Names should be submitted by May 20th.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg. Cmdr. O. Rees is placed on retired list with rank of Surgeon Captain.

Surg. Lieut.-Cmdr. L. Moss is allowed to withdraw from the Service with a gratuity.

Temp. Surg. Lieut. J. A. Watson is transferred to the permanent list.

ARMY MEDICAL SERVICE.

Col. W. E. Hardy is placed on half pay.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Col. and Bt. Col. C. B. Lawson retires on retired pay.

Lieut.-Col. J. P. Silver retires on retired pay on account of ill-health contracted on active service.

Lieut.-Col. H. A. Davidson relinquishes the acting rank of Colonel.

Lieut.-Col. C. J. O'Gorman relinquishes the temporary rank of Colonel.

Lieut.-Col. F. F. Carroll is restored to the establishment.

The undermentioned relinquish the acting rank of Lieutenant-Colonel: Major and Bt. Lieut.-Cols. W. F. Tyndale, B. A. Craig; Majors R. N. Hunt, H. W. Russell, C. J. Wyatt; Capt. and Bt. Majors R. E. Barnsley, P. S. Tomlinson.

Capt. and Bt. Major R. E. Barnsley to be acting Lieutenant-Colonel.

Capt. S. D. Robertson to be acting Major.

The undermentioned relinquish the acting rank of Major: Capts. C. Clarke, R. F. O'T. Dickinson, W. B. Rennie; Temp. Capts. P. K. McCowan, F. R. Brown, W. D. Cruickshank, C. H. B. Booth, S. Campbell.

Capt. R. H. Williams is placed temporarily on the half-pay list on account of ill-health contracted on active service.

Captains retiring receiving a gratuity: F. C. Davidson, R. B. Phillipps.

Officers relinquishing their commissions:—Temp. Lieut.-Col. A. G. P. Gipps (retains the rank of Lieutenant-Colonel). Temporary Majors retaining the rank of Major: E. B. C. White, T. W. Shaw, T. P. Devlin. Temp. Capts. H. Gardiner-Hill (on transfer to the R.A.F.) and (Brevet Major) A. E. Boycott (retains the Brevet rank of Major). Temporary Captains granted the rank of Major: T. M. Crawford, (acting Major) R. McRae, S. A. W. Munro, (acting Major) B. G. Brooke, W. V. Macaskie, J. Hewat. Captains retaining the rank of Captain: W. Tudhope, J. Keay. Temporary Captains retaining the rank of Captain: W. H. W. Mewhirter, M. Horan, F. B. Penfold, J. P. F. Waters, F. C. S. Bradbury, A. King, G. F. Hardy, J. G. Castellain, J. G. Ingouville, R. Lindsay, A. L. Robinson, F. Green, G. G. Old, A. Willatt, E. M. Balthaser, C. S. Wynne, J. Whiteside, A. H. H. Barclay, W. T. Munro, T. P. Hutchison, R. H. Rains, E. O. Gilkes, P. A. Dykes, E. D. Wellburn, E. Clarke, W. E. Stevenson, O. Carlyle, F. J. H. Begg, E. J. Blewitt, H. B. Waller, R. C. Macpherson, H. W. Bernard, E. S. B. Eames, T. W. Parry, S. Nockolds, M. A. Kirton, D. A. H. Moses, A. G. W. Thomson, H. G. E. Williams, P. J. O'Brien, A. J. Chillingworth, E. W. Blake, J. J. H. Ferguson, H. E. Gray, S. Wyborn, J. Menton, D. C. Norris, F. W. Rigby, R. B. Robson, D. M. Cox, G. H. F. Graves, D'A. I. Hamilton, R. T. St. J. Brooks, R. A. Wright, H. R. Souper, G. Bateman, W. N. Boog-Watson, J. G. Gemmell. Temp. Lieut. G. A. Fothergill (retains the rank of Lieutenant).

SPECIAL RESERVE OF OFFICERS.

Major M. R. Taylor relinquishes his commission on account of ill-health caused by wounds, and is granted the rank of Lieutenant-Colonel.

Capt. (acting Major) C. J. Rogerson to be acting Lieutenant-Colonel.

Captains relinquishing the acting rank of Major: H. D. Rollinson, A. F. L. Shields, M. Stewart, C. Armstrong.

TERRITORIAL FORCE.

3rd London General Hospital: Capt. S. H. Warren relinquishes his commission and retains the rank of Captain.

1st Western General Hospital: Capt. J. L. Roberts is restored to the establishment.

ROYAL AIR FORCE.

Medical Branch.—The undermentioned are transferred to the unemployed list: Capts. P. E. Williams, H. G. Anderson, L. W. Shelley, H. S. Baker, J. B. Barnett, D. C. Farquharson, A. Thompson, A. St. J. Hennessy, A. J. Davoren, G. McK. Thomas.

Dental Branch.—Capt. L. Wigoder is transferred to the unemployed list. Lieut. T. H. Jones relinquishes his commission and retains his rank.

INDIAN MEDICAL SERVICE.

Captains to be Majors: R. Knowles, W. E. Brierley, J. B. Lapsley, J. A. Shorten, R. B. S. Sewell, C. H. Fielding, W. L. Watson, J. W. Barnett, Madan Lal Puri, Satya Charan Pal, R. S. Townsend, R. B. Lloyd, A. C. Munro, A. G. Tresidder, G. G. Jolly, Sohrab Shapoorji Vazifdar, J. J. H. Nelson, E. S. Phipson, F. F. Smith, T. C. Boyd.

Captain to be temporary Major: R. E. Flowerdew.

Temporary Lieutenants to be temporary Captains: Justinian Anthony da Costa, Sundar Lal Bhandari, Armand Marcus Duarti, Aruldason Devasagayam, Aung Tun, Narendra Nath Ghosh, Priya Nath Lahiri, Satya Sakha Maitra, Sobha Ram Puri, Gopal Charan Sen, Bodh Raj Chaudhari, Yeshvant Prabhakar Gupte, Kannauthodath Padmanabha Menon, Shankar Ganesh Chavan, Joseph Costodio Sequeira, Gajanan Mukund Bhurke, Prabhaker Shanker Gupte, Nagendra Nath Saha (since deceased), Indra Bhusan Mazumdar, Bantwal Panduranga Baliga, Bhai Naranjan Singh Sethi, Ram Chandra Ganda, Gopal Chandra Ray, Dadabhoy Barjorji Doctor, Mohamed Ajmal Husain, Jiwanlal Kapoor, Yar Mohammad Siddique, Desraj Kehar, Coimbatore Venkataramanayar Krishnaswami, Dara Hormusji Bharucha, Dwarka Deish, Yeshwant Bhicajee Ranade, Har Bhagwan Vaid, Vittal Narain Benegal, Ramkrishna Venkata Rajam, Premankur De, Shiva Narain Govil, Bhagwan Das Myer, Harilal Prabhudas Dalal, Ambicaprasad Bajpayee, Krishnaji Nilkant Chhatre, Davaram Harumal Mirchandani, Suresh Candra Banerjee.

Medical Diary.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY, April 29th.—Papers:—Prof. J. W. Gregory: The Irish Eskers.—Miss K. M. Curtis: The Life History and Cytology of *Synchytrium Endoboticum* (Schilb.) Perc., the Cause of Wart Disease in Potato (communicated by Prof. V. H. Blackman).—Mr. B. Sahni: On the Structure and Affinities of *Acmopyle Pancheri*, Pilger (communicated by Prof. A. C. Seward).

ROYAL SOCIETY OF MEDICINE 1, Wimpole-street, W.

MEETINGS OF SECTIONS.

Monday, April 26th.

ODONTOLOGY (Hon. Secretaries—G. Paton Pollitt, W. Kelsey Fry, J. Howard Mummery): at 8 P.M.

Papers:

Mr. Gerald B. Ash: A Factor in the Pathology of Pyorrhœa.

Mr. H. Stobie: The Problem of Infection about the Apex of the Tooth.

Tuesday, April 27th.

MEDICINE (Hon. Secretaries—W. Cecil Bosanquet, J. H. Thursfield): at 5.30 P.M.

Annual General Meeting—Election of Officers and Council for 1920-1921.

TUBERCULOSIS SOCIETY OF GREAT BRITAIN AND IRELAND, at the Rooms of the Medical Society, 11, Chandos-street, Cavendish-square, W.

MONDAY, April 26th.—8 P.M., Paper:—Dr. C. Riviere: Some Points in the Early Diagnosis of Pulmonary Tuberculosis, followed by a discussion.

CHILD STUDY SOCIETY, LONDON, at the Royal Sanitary Institute, 90, Buckingham Palace-road, S.W.

THURSDAY, April 29th.—6 P.M., Sir A. E. Shipley: Biting Insects and Children (illustrated by lantern slides).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

MONDAY, April 26th.—2 P.M., Mr. B. Harman: Eye Department. 5 P.M., Dr. Morton: Carbon Dioxide Snow.

TUESDAY.—12 noon: Mr. T. Gray: Demonstration of Fractures, &c. 5 P.M., Mr. Banks Davis: Clinical Lecture (2).

WEDNESDAY.—2 P.M., Mr. D. Armour: Demonstration of Surgical Cases. 5 P.M., Mr. Addison: Ventral Hernia, Prevention and Treatment.

THURSDAY.—College closed. Annual Meeting, West London Hospital.

FRIDAY.—2.30 P.M., Dr. Pritchard: Demonstration of Medical Cases. 5 P.M., Dr. Burnford: Clinical Lecture with Cases.

SATURDAY.—10 A.M., Dr. A. Saunders: Medical Diseases of Children. 2 P.M., Dr. Owen: Medical Out-patients.

Daily:—10 A.M., Ward Visits. 2 P.M., In-patient and Out-patient Clinics and Operations.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL (UNIVERSITY OF LONDON).

A Course of Post-Graduate Lectures on Syphilis is being given by various members of the staff of King's College Hospital during the present year.

FRIDAY, April 30th.—9.15 P.M., Mr. T. P. Legg: Syphilis in Surgical Practice (1).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

MONDAY, April 26th.—2 P.M., Dr. Melville: X Ray Department.

TUESDAY.—2 P.M., Dr. D. Grant: Throat Department. 2.30 P.M., Demonstration:—Dr. Maitland: Medium Cases.

WEDNESDAY.—10.30 A.M., Dr. Punch: Demonstration of Museum Specimens. 2 P.M., Dr. Gosse: Cardiographic Department. 2.30 P.M., Demonstration:—Dr. Burrell: Early Cases.

THURSDAY.—10.30 A.M., Dr. Burrell: Artificial Pneumothorax. 2.30 P.M., Demonstration:—Dr. Punch: Early Cases.

FRIDAY.—2 P.M., Dr. Melville: X Ray Department. 2.30 P.M., Demonstration:—Dr. Fenton: Early Cases.

SATURDAY.—1 P.M., Dr. Batty Shaw: Special Demonstration in the Out-patient Department.

UNIVERSITY OF SHEFFIELD—FACULTY OF MEDICINE POST-GRADUATE LECTURES, at the Sheffield Royal Hospital.

WEDNESDAY, April 28th.—4 P.M., Prof. A. Hall: Bacterial Endocarditis.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE CLINIC.

TUESDAY, April 27th.—4.30 P.M., Lecture:—Mr. F. Westmacott: Early Diagnosis of Carcinoma of the Larynx.

SALFORD ROYAL HOSPITAL AND ANCOATS HOSPITAL POST-GRADUATE DEMONSTRATIONS, at the two Hospitals alternately.

THURSDAY, April 29th.—4.30 P.M., Dr. Renshaw: The Chemical and Bacteriological Examination of the Urine in Disease. (At Ancoats Hospital.)

Communications, Letters, &c., to the Editor have been received from—

A.—Auxiliary Royal Army Medical Corps Funds, Lond.; Mr. J. Aulich, Lond.

B.—Dr. A. Balfour, Lond.; Dr. C. F. Bailey, Brighton; Lieut.-Col. Sir J. Barrett, Melbourne; Sir R. Blair, Lond.; Mr. C. K. Bond, Lond.; Board of Education, Lond.; Blinded Soldiers and Sailors' Hostel, Lond., Chairman of; Dr. C. G. S. Baronsfeather, Pakhoi, South China; Dr. J. C. Boyd, Dunoon; Sir J. Byers, Belfast; British-American Chamber of Commerce, Lond.; Mr. U. R. Boulter, Seven Kings.

C.—Dr. H. C. Cameron, Lond.; Messrs. Cassell and Co., Lond.; Dr. C. W. Chapman, Lond.; Dr. C. Coombs, Bristol; Conjoint Board of Scientific Societies, Lond.; Dr. L. Calthrop, Harrogate; Dr. E. L. Collis, Cardiff; Sir F. Colyer, Lond.

D.—Mr. H. Dickinson, Lond.; Dr. J. Dulberg, Manchester; Department of Scientific and Industrial Research, Lond.; Messrs. J. L. Denman and Co., Lond.; Dr. W. A. Daley, Bootle; Mr. J. S. Dawbarn, Lond.

E.—Equitable Life Assurance Society, Lond.; Mr. D. L. Eadie, Edinburgh; Mr. W. McAdam Eccles, Lond.

F.—Federation of Medical and Allied Societies, Lond.; Major E. G. Ffrench, R.A.M.C., Lond.; Food Education Society, Lond.

G.—Dr. R. G. Gordon, Bath; Dr. R. R. Giddings, Nottingham; Dr. D. Gray, Peking; Great Northern Central Hospital, Lond.; Dr. H. H. Gellert, Bradford.

H.—Mrs. E. S. Hoole, Lond.; Dr. N. Hobhouse, Lond.; Dr. J. T. Hislop, Wrexham; Hoffmann-La Roche Chemical Works, Lond.

I.—Insurance Committee for the County of London; Industrial League and Council, Lond.

J.—Dr. G. G. Johnstone, Lond.

K.—Dr. G. Keynes, Lond.; King's College Hospital Medical School.

L.—Mr. G. Lunan, Edinburgh; London (Royal Free Hospital) School of Medicine for Women, Asst. Sec. of.

M.—Ministry of Health, Lond.; Dr. C. S. Myers, Lond.; Ministry of Pensions, Lond.; Ministry of Agriculture and Fisheries, Lond.; Mr. G. Mayall, Bolton; Mr. A. McMillan, New Romney; Dr. P. H. Manson-Bahr, Lond.; Miss H. Masters, Lond.

N.—National Safety Council, Chicago; Nurses' Co-operation, Lond.; Dr. H. B. Newham, Lond.; National Council of Public Morals, Lond.; National Association of Medical Herbalists of Great Britain.

O.—Miss K. O'Conor, Ware; Ophthalmological Society of the United Kingdom, Lond.; Dr. Orchard, Kingussie.

P.—Dr. A. G. Phear, Lond.; Capt. A. E. H. Pinch, Lond.; Dr. V. Pauchet, Paris; Mr. L. Paton, Lond.; Mr. J. H. Pringle, Glasgow; Dr. H. R. Phillips, Lond.; Major W. J. Pearson, Lond.

R.—Royal Society, Lond.; Royal Mail Steam Packet Co., Lond.; Mr. R. Robison, Lond.; Royal Faculty of Physicians and Surgeons, Glasgow; Royal Medical Benevolent Fund, Lond., Sec. of.; Royal Microscopical Society, Lond.; Royal Army Medical Corps Fund, Lond., Sec. of; Royal College of Physicians, Lond., Registrar of; Royal Infirmary, Manchester, Sec. of; Dr. W. Robinson, Sunderland; Dr. Rollier, Leysin; Royal Institution of Great Britain, Lond.; Royal Academy of Arts, Lond.; Royal College of Surgeons in Ireland, Dublin.

S.—Society for the Propagation of the Gospel in Foreign Parts, Lond.; Société des Sciences Médicales et Biologiques de Montpellier; Save the Children Fund, Lond.; Dr. E. Sayer, Lond.; Dr. H. Spencer, Lond.; Prof. W. Stirling, Manchester; Dr. G. F. Still, Lond.; Dr. A. H. Stephenson, Dickson, Tenn.; Sir Patrick Dun's Hospital, Dublin, Hon. Sec. of.

T.—Mr. H. M. Thornton, Lond.

U.—University of Glasgow; University of Liverpool, Appeal, Director of; United Services Medical Society, Lond., Sec. of.

V.—*Volta Review*, Washington, Associate Editor of.

W.—West London Post-Graduate College; Miss Weir, Killybegs; Dr. F. J. Waldo, Lond.; Dr. H. J. Walker, Brighton; Dr. R. T. Williamson, Manchester; Sir G. Sims Woodhead, Cambridge.

Appointments.

DE COURCY, T. L., B.A., M.D. Dub., has been appointed Honorary Ophthalmic Surgeon to Royal Southern Hospital, Liverpool.

PUDDICOMBE, T. P., M.B. Lond., D.P.H., Assistant County and School Medical Officer and Mental Expert under the Essex County Council.

RYLE, J. A., M.D. Lond., M.R.C.P. Lond., Assistant Physician to Guy's Hospital.

SANER, F. D., F.R.C.S., Surgeon to Out-patients, Great Northern Central Hospital.

WINTON, W. B., M.D., B.C., M.R.C.P., Assistant Physician at the Hospital for Diseases of the Skin, Blackfriars.

WYATT, R. B. H., M.R.C.S., L.R.C.P., Lecturer in Bacteriology in the University of Birmingham and Bacteriologist to the Queen's Hospital.

Certifying Surgeons under the Factory and Workshop Acts: JONES, E. P. (Roscommon); MORAN, M., L.R.C.P. & S. Irel. (Tipperary); MURRAY, J., L.R.C.P. & S. Edin. (Consett); QUINN, R. A., M.B., Ch.B. St. And. (Caldbeck).

Vacancies.

For further information refer to the advertisement columns.

All Saints' Hospital (for Genito-Urinary Diseases), 49-57, Vauxhall Bridge-road, Victoria, S.W.—H.S. £100.

Ashton-under-Lyne District Infirmary.—Asst. H.S.. £200.

Barnsley, Beckett Hospital.—Jun. H.S. £200.

Bath, Royal Mineral Water Hospital.—Res. M.O. £250.

Battersea General Hospital, Battersea Park, S.W.—Res. M.O. £250.

Belfast, Municipal Sanatorium, Whiteabbey.—Res. Med. Supt. £650.

Birkenhead Borough Hospital.—Jun. H.S. £170.

Birmingham, Children's Hospital.—Res. M.O. and Res. Surg. O. £120.

Birmingham General Hospital.—Res. Surg. O. £180.

Birmingham, West Heath Sanatorium.—Med. Supt. £500.

Birmingham, Yardley-road Sanatorium and Anti-tuberculosis Centre.—Second and Third Asst. Res. M.O.'s. £450 and £400.

Bootle Borough.—M.O.H., &c. £800.

Bradford Children's Hospital.—H.S. £180.

Bradford Royal Infirmary.—Two H.S.'s £200.

Bridgend, Glamorgan County Asylum.—Jun. Asst. M.O. £350.

Brighton, Royal Sussex County Hospital.—H.P. £150.

Burton-on-Trent County Borough.—Asst. M.O. £500.

Buxton, Derbyshire, Devonshire Hospital.—H.P. £250.

Cairo, Egyptian Government, Ministry of Education.—Professor of Pathology. L.E. 1200-1400.

Camberwell Infirmary, Brunswick-square, Camberwell.—Locum Tenens Asst. M.O. £7 7s. weekly.

Cambridge, Addenbrooke's Hospital.—H.S. £130.

Cancer Hospital, Fulham-road, S.W.—Three Anæsthetists.

Canterbury, Kent and Canterbury Hospital.—Res. M.O.'s. £200.

Cardiff, King Edward VII. Hospital.—Female H.S. £200.

Croydon Union.—M.O. for South Croydon District. £200.

Derby, Derbyshire Hospital for Women, Bridge-street.—Hon. Asst. S.

Durham University.—Asst. in the Dept. of Bacteriology. £600.

Elizabeth Garrett Anderson Hospital, Euston-road, N.W.—Female Jun. Asst. P., Clin. Assts., Two H.S.'s, H.P., and Obstet. Asst. £50 each.

Evelina Hospital for Children, Southwark, S.E.—H.S. £160.

Evelina Hospital for Sick Children, Southwark Bridge-road, S.E.—Medical Radiographer. £120.

Exeter City.—Asst. Tuberc. O. and Asst. M.O.H. £500.

Fulham Infirmary, St. Dunstan's-road, Hammersmith, W.—Jun. Asst. M.O. £300.

Gloucestershire Royal Infirmary and Eye Institution.—H.P. £175.

Great Yarmouth County Borough.—Asst. M.O.H. £500.

Hereford County and City Mental Hospital.—Second Asst. M.O. £350.

Hospital for Sick Children, Great Ormond-street, London, W.C.—Surg. Registrar. £200.

Huddersfield Royal Infirmary.—Asst. H.S. £150.

Inverness District Asylum.—Jun. Asst. M.O. £250.

Ipswich.—Asst. County M.O.H. £500.

Ipswich, East Suffolk County Education Committee.—Dent. S. £450.

Isleworth Infirmary and Workhouse and Central Scattered Homes.—Two Asst. M.O.'s. £300.

Leeds City, Tuberculosis Sanatorium, Killingbeck.—Med. Supt. £500.

Leeds Public Dispensary.—Res. M.O. £200.

Leeds University.—Demonstrator in Exp. Phys. £250.

Lincoln, Lindsey County Council.—Female Asst. M.O. £550.

London Temperance Hospital, Hampstead-road, N.W.—Cas. O. £120.

Loughborough and District General Hospital and Dispensary.—Res. H.S. £200.

Macclesfield, Cheshire County Asylum, Parkside.—Asst. M.O. £350.

Macclesfield General Infirmary.—Res. H.S. £200.

Maidstone, Kent County Ophthalmic Hospital.—H.S. £250.

Manchester County Asylum, Prestwich.—Asst. M.O. £450.

Metropolitan Asylums Board, North-Eastern Fever Hospital, Tottenham, and Western Fever Hospital, Fulham.—Consulting Otologist. £250.

Middlesbrough, North Ormesby Hospital.—Asst. H.S. £175.

Middlesbrough, North Riding Infirmary.—H.S. £200.

Mount Vernon Hospital for Tuberculosis and Diseases of the Chest, Northwood, Middlesex.—Asst. Res. M.O. £200.

Newcastle-upon-Tyne, City Hospital for Infectious Diseases.—Res. Med. Asst. £350.

Newport, Mon., Royal Gwent Hospital.—Fourth Res. M.O. £180.

Norfolk County.—Tuberc. O. £600.

Northampton General Hospital.—H.S. £150.

North Riding of Yorkshire County Council, Education Committee.—Asst. Sch. M.O. £500.

Northumberland County.—Sch. Med. Insp. £500.

Norwich City.—Asst. M.O.H. and Res. M.O. at Isolation Hospital. £450.

Norwich, Norfolk and Norwich Hospital.—Cas. O. £200.

Nottingham Education Committee.—Sch. Dent. £500.

Nottingham, Notts County Council.—Female Asst. Child Welfare M.O. and Asst. Sch. M.O. £500.

Oldham Royal Infirmary.—Third H.S. £200.

Peterborough City and Borough.—M.O.H. £650.

Portsmouth Royal Hospital.—H.S. £150.

Preston Royal Infirmary.—Jun. H.S. £180.

Queen Charlotte's Lying-in Hospital, Marylebone-road, N.W.—Asst. Res. M.O. £60.

Queen Mary's Hospital for East End, Stratford, E.—H.P.

Rochester, Kent, St. Bartholomew's Hospital.—Jun. Res. M.O. £150.

Royal Free Hospital, Gray's Inn-road, W.C.—Sen. Res. M.O. £200.

St. John's Hospital for Diseases of the Skin, 49, Leicester-square, W.C.—Two Asst. P.'s.

St. Marylebone General Dispensary, 77, Welbeck-street, Cavendish-square, W.—Res. M.O. £200.

St. Mary's Hospital for Women and Children, Plaistow, London, E.—Res. M.O. £200.

Salford Education Committee.—Asst. Sch. M.O. £400 to £600.

Salford Royal Hospital.—H.S. £150.

Sheffield, East End Branch of the Children's Hospital.—H.S. £150.

Sheffield Royal Hospital.—Asst. Cas. O. £150.

Sheffield Royal Infirmary.—Two H.S's and one Ear, Nose, and Throat H.S. £150.

Shoreditch Hospital, 204, Hoxton-street, N.—Two Res. Asst. M.O.'s. £400 and £350 respectively.

Stamford, Rutland, and General Infirmary, Stamford.—H.S. £200.

Stoke-on-Trent, North Staffordshire Infirmary.—H.S. £200.

Sunderland Royal Infirmary—H.P. £200.

Swansea General and Eye Hospital.—Two H.S.'s. £200.

Torquay, Torbay Hospital.—H.S. £200.

Trowbridge, Wilts County Council.—Third Sch. Dent. £400.

University of London, King's College, Department of Physiology.—Demonstrator in Physiology. £300.

University of London, St. Mary's Hospital Medical School.—University Chair of Physiology. £900.

Wells Asylum, Somerset.—Sen. Asst. M.O., £400.

West Bromwich and District Hospital.—Res. H.S. £200.

West Ham Union.—Two Specialist Consultants. £150.

Western Dispensary, Rochester-row, S.W.—Vacancy on Med. Staff.

Wimbledon, Borough of.—Asst. M.O.H. £500.

Wolverhampton and Staffordshire General Hospital.—Hon. P. Also Hon. M.O. for X Ray and Electro-Therapeutic Department. £100.

Woolwich Tuberculosis Dispensary, Maxey-road, Plumstead, S.E.—Asst. Tuberc. O. £500.

Worcester County Borough.—Asst. M.O.H. £500.

Worcester County and City Mental Hospital, Powick.—Jun. Asst. M.O. £300.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Blarney, Kingston-on-Thames, Menai Bridge, and North Berwick.

Births, Marriages, and Deaths.

BIRTHS.

BENSON.—On April 17th, at Fiddington House, Market Lavington, the wife of J. R. Benson, F.R.C.S., of a son.

EASTON.—On April 7th, at a nursing home, the wife of Wilfred A. Easton, M.R.C.S., L.R.C.P., L.D.S., Wimbledon Park, of a son.

FARNFIELD.—On April 14th, at Ashburnham-road, Hastings, the wife of Dr. J. S. Farnfield, of a son.

MARTIN.—On April 7th, at Park-gardens, Glasgow, the wife of Captain W. Strelley Martin, M.C., R.A.M.C., of a daughter.

PINNOCK.—On April 12th, the wife of Dudley Denham Pinnock, F.R.C.S., of a son.

PRIDHAM.—On April 12th, at the Nursing Home of St. Andrew's Hospital, Dollis Hill, the wife of J. A. Pridham, M.C., L.R.C.P., M.R.C.S., of a daughter.

VLASTO.—On April 15th, at 29, Porchester-terrace, W. 2, Chrissy (née Croil), the wife of M. Vlasto, F.R.C.S., of a daughter.

WILKINSON.—On April 16th, the wife of Dr. Stephen Harold Wilkinson, of a daughter.

MARRIAGES.

ABRAHAM—FRANCIS.—On April 21st, at St. Martin-in-the-Fields, London, J. Johnston Abraham, M.D., F.R.C.S., C.B.E., D.S.O., to Lilian Angela Francis, F.R.M.S., eldest daughter of Dr. H. A. Francis.

EDWARDS—HOSKIN.—On April 13th, at the Chapel Royal, Savoy, Arthur Tudor Edwards, M.C. Cantab., F.R.C.S., to Evelyn, only daughter of the late D. Theophilus Hoskin, J.P., and Mrs. Hoskin, of Cumberland-mansions, W., and Cornwall.

GARMAN—LOCKE LANCASTER.—On April 15th, at St. John the Evangelist, Notting-hill, Dr. Edwin C. Garman, to Florence, widow of Robert Locke Lancaster, and daughter of the late Rev. Canon Gandell.

DEATHS.

COLLIS.—On April 14th, at Sandown, Isle of Wight, Dr. Robert William Collis, in his 65th year.

DE CASTRO.—On April 14th, suddenly, at Drummond-road, Bournemouth, George de Castro, M.R.C.S., L.R.C.P.

HENDERSON.—On April 19th, at Littlecot, Harnham Hills, Salisbury, Thomas Bonhote Henderson, M.A., M.B., F.R.C.S.

HUNT.—On the 17th April, at Uplands, Tettenhall, Staffs (the residence of his brother-in-law), Joseph William Hunt, M.D., B.S. (Lond.), formerly of Woodchester, Upper Clapton, aged 68. No flowers.

TYRRELL.—On April 14th, at Alexandra-road, N.W., Walter Guy Beauchamp Tyrrell, M.R.C.S., L.R.C.P., D.P.H., of Hilmarton-road, N., in his 59th year.

N.B.*—*A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

LAMBETH MEDICAL DEGREES.

IN the Middle Ages degrees in divinity, law, and medicine were granted by the Popes of Rome independently of the universities, and prior to the Reformation the Archbishop of Canterbury exerted his right to confer academic degrees in this country by virtue of his position as *legatus natus* of the Holy Father. After the break with papal authority, this privilege of the See of Canterbury was confirmed by statute in 1534 (25 Hen. VIII. c. 21), which provided that the Archbishop of Canterbury shall have power to grant "all manner such licenses, dispensations, compositions, faculties, grants, receipts, delegacies, instruments, and all other writings for causes not being contrary or repugnant to the Holy Scriptures and laws of God, as heretofore hath been used and accustomed to be had and obtained by your Highness or any of your most noble progenitors, or any of your or their subjects at the See of Rome." Degrees are understood to be included in the term "faculties," and the episcopal privilege has, during the four centuries which have elapsed, never been abrogated. The Index to the Statutes in Force still speaks of the "power of the Archbishop of Canterbury to grant Dispensations and Licenses."

But although always existing, the right has been exerted in very varying degrees at different times. Cranmer is known to have commissioned the Bishop of Norwich to confer the degree of D.D. on a certain Eligius Ferrers. Prior to the Restoration there is record of only seven bestowals, none of them being medical degrees. In 1660 Archbishop Juxon conferred an M.D. and an M.B. degree, and between his death in 1663 and the year 1848 there were 451 Lambeth graduates, 31 of whom secured the right to place M.D. Cantuar. after their names, and one—namely, Peter Dent, of Trinity College, Cambridge—became M.B. Cantuar. in 1678.

In 1858, when the right to practise medicine became strictly limited by statute, a section in the Medical Act provided for the registration of Lambeth medical degrees if granted prior to the passing of the Act. The gentlemen eligible for such registration are contained in the following list of Lambeth doctors of medicine, which is complete from the beginning of last century up to the passing of the Medical Act:—

Year of conferment.	Name and other qualifications so far as known.
1803	Robert Pope.
1806	Thomas Day.
1817	Whitlock Nicoll, M.R.C.S., M.D. Aberd. and Glasg.
1818	John Day.
1819	Carr Ellison Lucas.
1822	William Oliver Locke.
1824	James Rumsey.
1825	Daniel Jarvis.
1826	Edward Grimstone.
1827	Sir Charles Mansfield-Clarke, Bart., M.R.C.S., F.R.C.P. Lond.
	William Chandler.
1828	William Samways Oke, L.R.C.P., M.R.C.S., L.S.A.
1836	Sir David Davies, K.G.H., L.R.C.P.
1840	Robert Hull, L.R.C.P., M.R.C.S.
1841	Sir William Hyde Pearson.
1849	Joseph Laurie, L.R.C.S. Edin.
1850	William Bayes, M.R.C.S., L.R.C.P.
	Edmund Charles Johnson, M.R.C.S., F.R.C.S.
1851	Frederick Gilder Julius, M.R.C.S., L.S.A., F.R.C.S.
	John Green Bishop, M.R.C.S.
1854	George Canney, M.R.C.S., L.S.A.
1855	John Hodgson Ramsbotham, M.R.C.S., L.S.A., M.D. Erlangen.
	Ralph Barnes Grindod, L.S.A., M.D. Erlangen.
1856	William Sharp, M.R.C.S., L.S.A.
	Edward Phillips, M.R.C.S.
1858	Edward Cronin, M.D. Dub.
	Edmund Smith, M.R.C.S., L.S.A.
	William Baker.

Shortly after the passing of the Act three further degrees were conferred, viz.:—(1861) John Rayner, L.S.A., M.R.C.S., M.R.C.P. Edin., and Edward Westall; (1862) William Sherwin. But the practice then ceased, and it is now nearly 60 years since an M.D. Cantuar. has been granted, and, as far as we know, the death of the last holder was recorded in the columns of THE LANCET of April 18th, 1896:—

SHARP.—On April 10th, at Llandudno, William Sharp, M.D. Lambeth, F.R.S., of Rugby, aged 91.

With a few possible exceptions, it will be seen that in all, or nearly all, of these pontifical conferments the legal right to practise medicine was already there. This was certainly so in the case of Sir Charles Mansfield-Clarke, to whom Archbishop Manners-Sutton granted an M.D. in the year 1827, and who had held the diploma of M.R.C.S. since 1802. On this occasion a letter signed "Peter Permissus," addressed to Sir Henry Halford, P.R.C.P., appeared in THE LANCET (April 12th, 1828), in which the writer admits that no class of men understand better the value of learning than the clergy, and goes on:—

> "The whole of the existing bench of Bishops have been educated at Oxford or Cambridge, and they feel reluctant in ordaining such as present themselves from other universities. The College of Physicians insist on a residence at certain universities, and a previous diploma, before they will proceed to the examination of a candidate. Why, then, should the mitre, in defiance of these wholesome establishments, interpose an unrepealed abuse, an obsolete remnant of monkish fraud and imposture, to sanction a probable depredation on the health of his Majesty's loyal subjects?"

He further inquires concerning the ceremony: "Did his Grace's chaplain plumb his depth in Latin? Did he sound him in Greek? or did he gauge his orthodoxy? What was the nature of the holy diploma obtained?" And although "Peter Permissus" seems to have been misinformed in regard to the previous medical training of this particular candidate, there may be a point in his blunt questions.

THE RHEUMATIC SCHOOL CHILD.

IN the course of a lecture on Medical Inspection in Schools at the Day Training College of the L.C.C., Southampton-row, London, W.C., on April 14th, Dr. F. S. Langmead pointed out that rheumatism is essentially a disease of children, the simulating symptoms at other ages being frequently due to different causes, such as arthritis and rheumatic gout. Rheumatism and tuberculosis are both common diseases among school children, said the lecturer, both very liable to recur after apparent cure, and both leading to considerable crippling. Among the causes of rheumatism he placed hereditary influence, damp houses, and low-lying districts. A chart of the distribution of the disease throughout London showed that the cases were most frequent in the neighbourhood of buried rivers, along the Thames, Wandle, and the tributaries, and along the sites of the Fleet and the East and West Bourne. The proportion of girls to boys affected was about 2 to 1. The organism causing the disease gained entrance into the body of the susceptible individual chiefly through the tonsils in all probability; tonsillitis was often the precursor of acute rheumatism. An investigation made by the lecturer on 2556 children of all ages had confirmed the observation that the tonsils were enlarged four times as frequently in rheumatic as in normal children. Rheumatism not infrequently followed scarlet fever, which also produced sore-throat and tonsillitis. Other possible modes of ingress for the infection were the throat, the nose, the naso-pharynx, mouth, and perhaps also the bowel. Rheumatic children formed a fairly definite type, being often bright and intelligent, though not up to standard in consequence of loss of time by illness. They were excitable and nervous, worked in fits and starts, and showed want of application, as well as being fidgety and imaginative. Imagination showed itself in disturbed dreams. The manifestations of the disease were numerous, and included fever, swelling of joints, sweating, furred tongue, a curious sour smell, and painful and tender joints. There might be pains in the limbs, as distinct from joints, in the muscles and in the bones. The so-called growing pains were rheumatic symptoms, showing that the foundation for future rheumatic trouble was being laid. In addition there might be bleeding from the nose, pains in the pit of the stomach, increasing pallor, anæmia, chorea, and, most important of all, heart disease. Statistics showed that among the physically defective in schools heart cases constituted about a third of the physically defective children, and heart conditions were the chief cause of death. The heart cases in our hospitals had their foundation in school life. Precaution should be taken to prevent a fresh attack of rheumatism, but it was, of course, impossible to mend a damaged heart. The children should be protected from cold and wet and receive medical treatment at the first manifestation of disease. Chorea might occur without any other symptom of rheumatism, its differentiation from habit spasm or tick was important. The symptoms of tuberculosis must be carefully distinguished from those of rheumatism; observations in this connexion should be especially directed to family history, want of gain in weight (not necessarily loss of weight), anæmia, poor appetite, tiredness, indigestion, and cough as symptomatic of tuberculosis. At home restless sleep and a good deal of sweating might be noticed and should be inquired into. An essential difference in the treatment of the two diseases was that while rheumatic children should be protected from the weather consumptive ones should be in the open air at all possible times.

THE INVENTOR OF THE INCUBATOR.

THE death of Mr. Charles Edward Hearson on March 27th, in his seventy-fifth year, should not pass unnoticed by medical men. Mr. Hearson's name is indissolubly connected with the incubator for hatching eggs, for it was the simplicity and ingenuity of his heat regulator which brought the incubator into popular use; and when the science of bacteriology was in its infancy some 40 years ago he was asked by a leading bacteriologist to adapt his thermostat for the cultivation of micro-organisms. Since that day Hearson's incubators have been in use in every research laboratory throughout the world, while the first thermostat constructed by him still survives in working order in a London laboratory. Besides the biological incubator he designed a number of other appliances to meet the requirements of the bacteriologist. Early in the war the firm with which he was connected supplied at 12 hours' notice the apparatus required for the equipment of a special laboratory to cope with the outbreak of cerebro-spinal fever. Another popular and useful invention was the "thermostatic nurse," in extensive use for feeble and premature infants. Mr. Hearson was for eight years the representative of Camberwell on the Metropolitan Water Board, and during part of that time was chairman of the Works and Stores Committee. During his chairmanship he cut the first sod in the construction of the Island Barn reservoir and presided at the public opening of the Walton pumping-station. Little known to the public, his life greatly conduced to the advancement of medical science.

DUBLIN RADIUM INSTITUTE.

A BRIEF report by Dr. Walter C. Stevenson, of the Radium Institute of Dublin, has just been published as an appendix to the report of the Council of the Royal Dublin Society for the year ended Oct. 31st, 1919. The quantity of radium emanation issued during the year amounted to 3215·4 millicuries, and it appears that the work of the institute is carried out entirely by means of emanation tubes and applicators, no radium salt apparatus being employed. The report is in such general terms that no indications are given as to the line of treatment adopted, and the dosage and exposures employed in the various conditions—an omission which is disappointing. Much energy has been expended on the treatment of military orthopædic cases, the statement being made that radium therapy shortens the period of convalescence following gunshot wounds, and that it aids recovery by softening scar-tissue, improving the nutrition of the injured part, and exerting an analgesic effect on painful and tender scars. Two of the Government patients were treated for cancer, one suffering from advanced condition of carcinoma of the tongue. The treatment caused considerable local improvement, and enabled the patient to recover sufficiently to go home for a fortnight's leave, though he died three months later. The list of civil patients comprises 19 cases of malignant disease, most of them in so advanced a stage as to preclude any cure; the treatment was palliative, and the majority was lost sight of. One tongue case is recorded as having been seen four months after treatment, and looking almost well. The report also alludes to cases of cancer of the œsophagus and of Hodgkin's disease, in which definite, though apparently only temporary, improvement followed upon radium treatment. The report is worthy of perusal by all interested in radium therapy.

THE INCISION OF SMALL-POX PUSTULES.

Dr. C. G. S. Baronsfeather writes from Pakhoi, South China, under date Feb. 25th: We are having a serious outbreak of small-pox here just now, for, although the Chinese believe in vaccination, coolies, women, slave-girls—regarded by them as "trash"—are only vaccinated when convenient. As a result we see some serious cases, including confluent types.

One little girl in the isolation ward of the C.M.S. Hospital here seemed so miserable with a mass of pustules which were confluent in places that, remembering the misery caused in my own youngster by a single scabies pustule and the immediate relief when it was opened, I opened about 30-40 of the pustules on the face. Next day the child was remarkably better, her eyes were open, and she had ceased groaning. After waiting to assure myself that the improvement was lasting, I took a sharp-curved bistoury and opened some 30 more, in some cases the pus squirted out, and a mixture of olive and eucalyptus oils was then rubbed over the head and face. On the principle that pus under tension should always be released, and variola being a disease confined largely to the skin, death ensuing from toxic absorption, common sense suggests this method of treatment, although condemned in text-books as old-fashioned and useless. A dilute solution of iodine tincture was painted over the face in all cases during the opening days, but did not give appreciable relief.

PUBLIC HEALTH IN SOMALILAND.

No reliable information is available as to the Somali population in the Protectorate, but 300,000 is generally quoted as an approximate figure. A Census of the alien community (excluding Europeans) was taken in the three coast towns in 1911, the return then being as follows: Indian, 741; Arabs, 1857; and mixed population, 798.

The general public health during 1918-19 was not as good as in previous years, the admissions to hospital showing a great increase. The influenza epidemic visited Somaliland early in November, 1918. The disease was first noticed at Berbera, whither it had doubtless come from Aden, where it had been present for some time. From Berbera it spread very rapidly throughout the Protectorate, and within a fortnight had reached all outlying stations. The epidemic had subsided by the end of December. The disease was often complicated by pneumonia, which accounted for most of the deaths recorded. It is estimated that at least 50 per cent. of the Somali population contracted the disease and that 5 per cent. died. There were no deaths among the Europeans in the Protectorate.

There was an appreciable decrease in the number of malarial cases recorded. There would appear to have been an increase of relapsing fever among the natives, and, as usual, nearly all the cases occurred at Hargeisa, where the *Ornithodorus moubata* tick is found. It is probable, however, that the apparent increase is due to the fact that greater attention is being paid to the disease and that the natives are beginning to realise the benefits of early treatment.

Excellent results have been obtained from intravenous injections of galyl or salvarsan. In many cases one injection effected a cure, although more chronic cases did not respond so readily. Hardly any cases occurred among the troops or police owing to the preventive measures taken.

An epidemic of small-pox was kept well in hand by preventive measures, but by March 31st, 1919, some 70 deaths had been recorded, mostly at Burao. A few cases of mumps were recorded during the year; a very similar disease is seen among camels in Somaliland and possibly elsewhere. The prevalent diseases are pulmonary tuberculosis, venereal diseases, chronic rheumatism, bronchitis, conjunctivitis, and ulcers. Scurvy occasionally occurs, but is very much on the decrease.

The total rainfall in Berbera in 1918 was 1·93 in.; in the interior it was considerably more than this, but up to the present it has not been practicable to keep records, except in Berbera. The highest shade temperature recorded was 114° F. in July, while the lowest was 59° in January. Away from the sea coast the climate is chiefly remarkable for its very dry character, and in the interior it is comparatively healthy throughout the year; but in the coast belt during the *Kharif* season—i.e., from June 1st to mid-September—the climatic conditions are exceedingly trying, particularly for Europeans, the effect on the nervous system being very marked. During this period terrific gales of hot sand-laden winds are prevalent and the heat is intense, the thermometer registering 105° to 115° in the shade, and seldom falling below 100° at night. During November, December, January, and February the climatic conditions at the coast greatly improve.

The general health of Europeans was not good during the year; the average number resident was only 36, and eight were invalided to England.

THE MEDICAL STUDENT'S GENEROSITY.

To the Editor of THE LANCET.

SIR,—The case of blood transfusion before operation, as cited by Dr. H. Williamson in his article in THE LANCET of April 17th, is certainly interesting and instructive, and he is to be congratulated on his successful treatment of the case. As blood transfusion is likely to become popular in the future and donors will be much in request, I beg to suggest that the students should not be permitted to be the donors for the following reasons: 1. A medical student's life, especially whilst attending hospital, is not one of the healthiest, and he requires all his reserve strength for his immediate work and for his future struggle in life. 2. It is the duty of the relations of the sick person and not the duty of the student to sacrifice themselves; the former can practically always be called upon if the emergency arises. 3. Venesection is not always such a safe and simple procedure as described in medical literature. I have seen several patients whose wounds have not healed by first intention, and whose convalescence has been tedious and prolonged. 4. It is very difficult for a student to refuse when requested to offer himself as a donor, as there is a chance of him being slighted by his seniors and scoffed at by his equals—a thing no man appreciates. 5. It is not fair to students' parents, who spend much money and care to keep their sons in good health for their future career.

I am, Sir, yours faithfully,

H. J. WALKER, F.R.C.S. Edin., M.R.C.S., L.R.C.P.

Brighton, April 18th, 1920.

ON Wednesday last Miss L. A. Francis, F.R.M.S., bacteriologist during the war to the Central London Ophthalmic Hospital, and eldest daughter of Dr. H. A. Francis, was married to Dr. J. J. Abraham, C.B.E., D.S.O., author of "The Surgeon's Log."

Dr. O. is thanked for his suggestion.

G. G. J.—The interesting table is receiving attention.